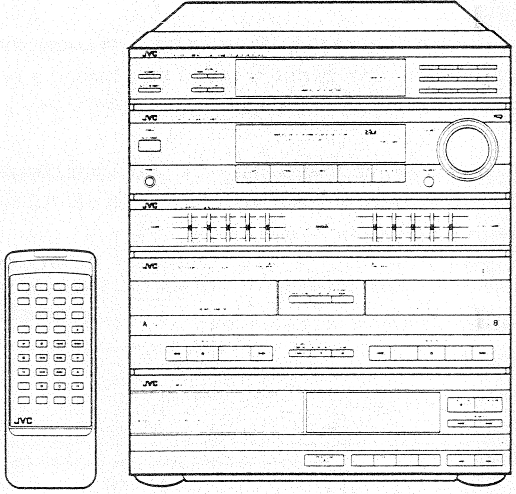
752

JVC

SERVICE MANUAL

COMPACT DISC CASSETTE DECK RECEIVER

MODEL No. CA-E33BK CA-E33LBK



COMPACT disc DIGITAL AUDIO

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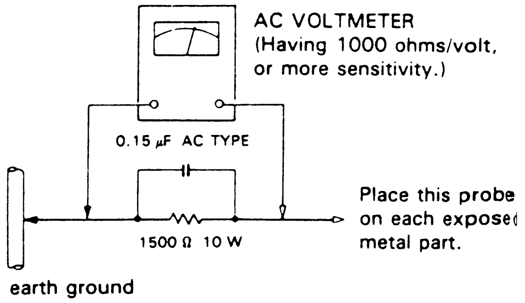
752

No. 20149
Jan. 1990

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15 μF AC TYPE
1500 Ω 10 W
Place this probe on each exposed metal part.
Good earth ground

Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: There are no serviceable parts inside the Laser Unit.
4. CAUTION: Do not disassemble the laser Unit. Replace the complete Laser Unit if it malfunctions.
5. CAUTION: The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated.
   It is dangerous to defeat the safety switches.
6. CAUTION: If safety switches malfunction, the laser is able to function.
7. CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

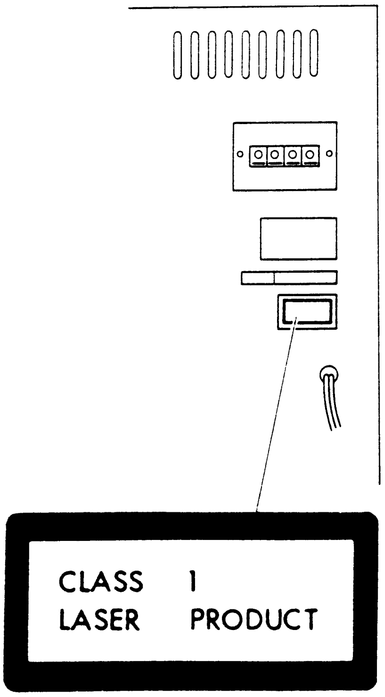
VARNING: OSYNLIG LASERSTRÅLNING UPPSTÅR VID KOMPONENTENS ÖPPNING NÄR SÄKERHETSBRYTAREN ÄR FRÅNSLAGEN.

VAROITUS: LAITE SISÄLTÄÄ LASERDIODIN, JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ.

ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION.
UNDGÅ UDSÆTTELSE FOR STRÅLING.

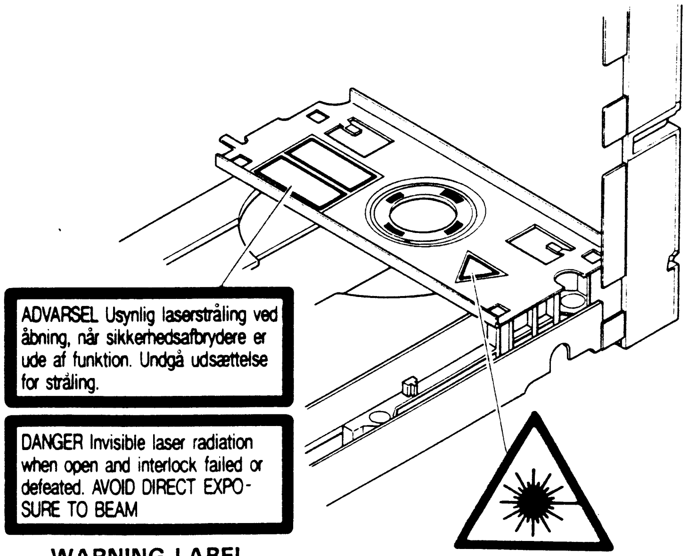
ADVARSEL: USYNLIG LASERSTRÅLING VED ÅPNING NÅR SIKKERHETSBRYTEREN ER AVSLOTT.
UNNGÅ UTSETTELSE FOR STRÅLING.

REPRODUCTION AND POSITION OF LABELS



CLASS 1
LASER PRODUCT

CLASSIFICATION LABEL
(Except for the U.S.A. and Canada)



ADVARSEL Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

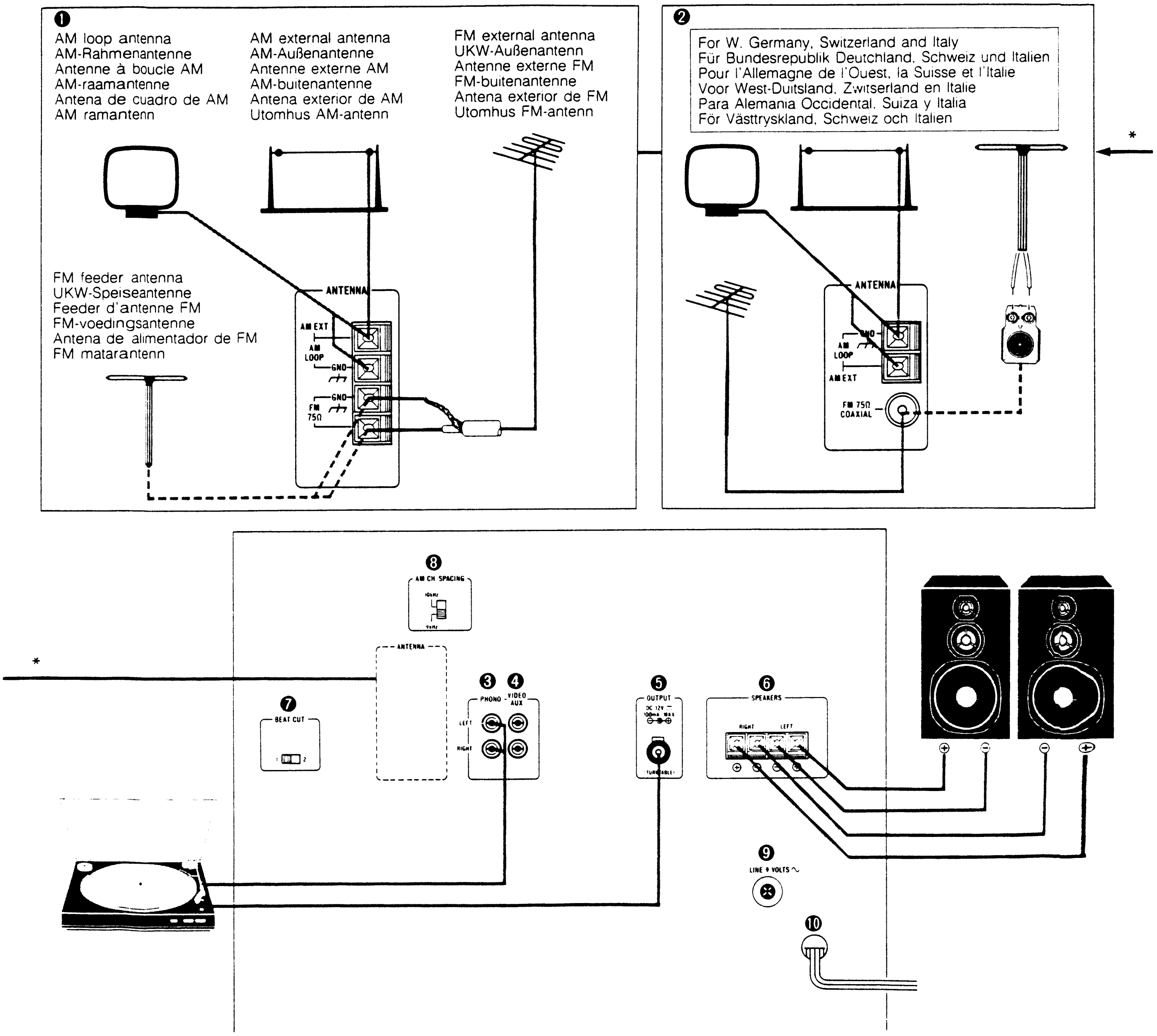
DANGER Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM

WARNING LABEL

HAZARD SYMBOL LABEL
(Only for Continental Europe)

Instruction Book

CONNECTION DIAGRAM


❶
AM loop antenna
AM-Rahmenantenne
Antenne à boucle AM
AM-raamantenne
Antena de cuadro de AM
AM ramantenn
AM external antenna
AM-Außenantenne
Antenne externe AM
AM-buitenantenne
Antena exterior de AM
Utomhus AM-antenn
FM external antenna
UKW-Außenantenn
Antenne externe FM
FM-buitenantenne
Antena exterior de FM
Utomhus FM-antenn
FM feeder antenna
UKW-Speiseantenne
Feeder d'antenne FM
FM-voedingsantenne
Antena de alimentador de FM
FM matarantenn
ANTENNA
AM EXT
AM LOOP
GND
FM 75Ω
❷
For W. Germany, Switzerland and Italy
Für Bundesrepublik Deutchland, Schweiz und Italien
Pour l'Allemagne de l'Ouest, la Suisse et l'Italie
Voor West-Duitsland, Zwitserland en Italie
Para Alemania Occidental, Suiza y Italia
För Västtryskland, Schweiz och Italien
*
ANTENNA
GND
AM LOOP
AM EXT
FM 75Ω COAXIAL
❽
AM CH SPACING
10kHz
9kHz
*
ANTENNA
❼
BEAT CUT
1 2
❸ ❹
PHONO
VIDEO AUX
LEFT
RIGHT
❺
OUTPUT
DC 12V 100mA MAX
TURNTABLE
❻
SPEAKERS
RIGHT
LEFT
❾
LINE VOLTS
❿

- ❶ External ANTENNA terminals
- ❷ External ANTENNA terminals (for W. Germany, Switzerland and Itary)
- ❸ PHONO terminals
- ❹ VIDEO/AUX terminals
- ❺ DC OUTPUT terminal
  Connect the proper turntable as indicated at each terminal.
- ❻ SPEAKERS terminals
- ❼ BEAT CUT knob
  Normally set to "1"
  (See Fig. 10, page 9)
- ❽ AM channel spacing knob* (See *1, page 23.)
- ❾ Voltage selector*
  When this equipment is used in an area where the supply voltage is different from the preset voltage, reset the voltage selector to the correct position.
- * Not provided for the U.K., Australia and Continental Europe.
- ❿ Power cord

Notes:

1. **Connect the speaker cords correctly; L to L and R to R.**
2. **Switch the power off when connecting any component.**
3. **Connect plugs or wires firmly. Poor contact may result in hum.**
4. **Use speakers with the correct impedance. The correct impedance is indicated on the rear panel.**

ANTENNAS

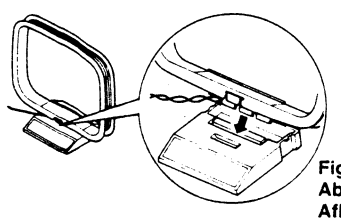


Fig. 1
Abb. 1
Afb. 1

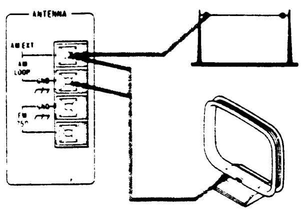


Fig. 2
Abb. 2
Afb. 2

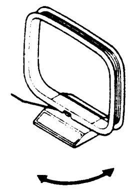


Fig. 3
Abb. 3
Afb. 3

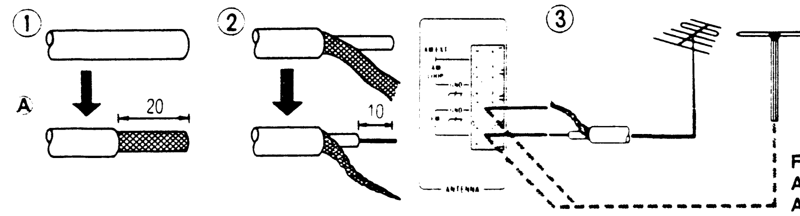


Fig. 4
Abb. 4
Afb. 4

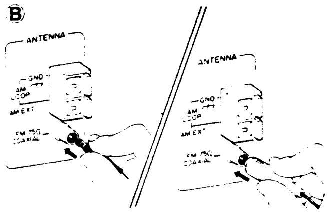
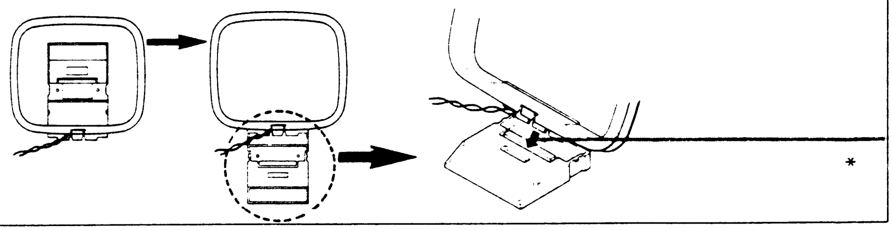


Fig. 5
Abb. 5
Afb. 5

How to set up the loop antenna.
Montage der Ringantenne.
Comment monter l'antenne-cadre.
Installeren van de raamantenne.
Cómo se instala la antena de cuadro.
Så sätts ramantennen upp.



* Insert the arrow part.
Den mit einem Pfeil bezeichneten Teil einstecken.
Insérer la partie fléchée.
Steek het pijl-gedeelte naar binnen.
Inserte la parte de la flecha.
Sätt in den pilmärkta delen.

Fig. 6
Abb. 6
Afb. 6

AM Antenna

How to fix the loop antenna (Fig. 1)

- Install the antenna by insering it in the direction of the arrow. (see Fig. 6)
- Place at a distance from the power-source cord, signal cord and metal fixtures on the main body, in a spot where reception is good.

AM (MW/LW) loop antenna (Fig. 2)

This antenna is for the reception of local AM broadcast.

AM (MW/LW) external antenna (Fig. 2)

If AM reception is unsatisfactory, connect an external AM antenna (single-wire antenna) to the AM antenna terminal.

Noise and interference (Fig. 3)

Change the direction of the loop antenna or reinstall it in a better position when reception is noisy.

Notes:

- **If the provided loop antenna is not connected, it will be impossible to receive AM broadcasts.**
- **When installing an external AM antenna, leave the AM loop antenna connected.**

FM Antenna

How to set the FM antennas

Antenna terminals differ according to the markets.

After checking up your set, select the connection method out of Ⓐ, Ⓑ or Ⓒ.

Ⓐ Fig. 4

How to connect the coaxial

① Strip off the sheath to expose the braid about 20 mm (13/16").
② Open the braid to expose the conductor about 10 mm (7/16").
③ Plug the conductor into the FM ANTENNA terminal.

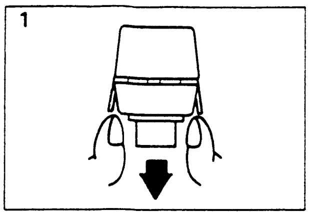
- Taper off the braid and plug it into the GND terminal.

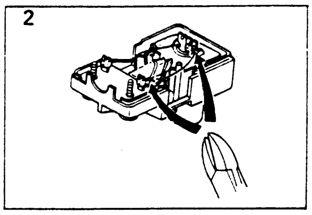
FM feeder antennas

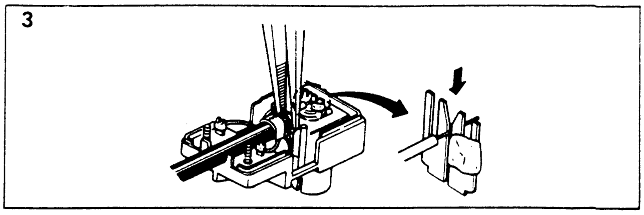
Plug into the FM antenna terminal.

Ⓑ Fig. 5

- The FM wire antenna provided can be connected to a 75-ohm coaxial jack as a temporary measure.
- 75-ohm antenna with coaxial type connector (DIN 45 332) should be connected to the 75-ohm terminal.







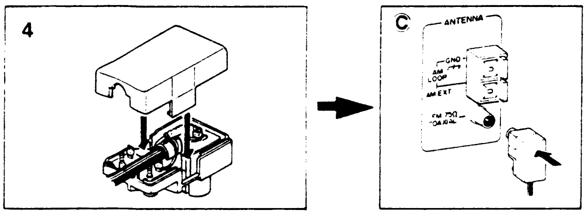

4
Ⓒ
ANTENNA
GND
AM LOOP
AM EXT
FM 75Ω COAXIAL

Fig. 7
Abb. 7
Afb. 7

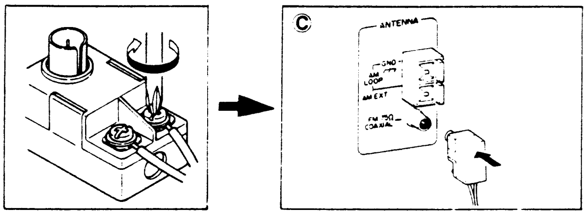

Ⓒ
ANTENNA
GND
AM LOOP
AM EXT
FM 75Ω COAXIAL

Fig. 8
Abb. 8
Afb. 8

Ⓒ Fig. 7, Fig. 8

- **How to connect the FM connector**

In case of a 75-ohm antenna (Fig. 7)

1. Open the claws at both sides and remove the cover.
2. Cut both ends of the cord and remove it. (only when using coaxial cable)
3. Fix the coaxial cable and its core.
4. Put on the cover.

In case of a 300-ohm antenna (Fig. 8)

It is not necessary to remove the cover. If the wire inside is cut, 300 ohm antenna can not be used.

Notes:

- **Choose antennas to meet the reception conditions.**
- **Orient and fix antennas where audio reception is the clearest.**

How to connect cords (Fig. 9)

① Open antenna terminal levers.
② Plug cords into the terminals.
③ Close the levers.

BEAT CUT knob (Fig. 10)

When recording an AM (MW/LW) broadcast, beats may occur.
Set the BEAT CUT knob located on the rear panel to "1" or "2" so beats will be eliminated.

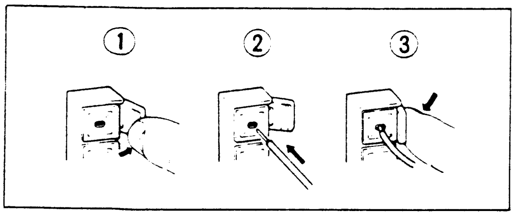


Fig. 9
Abb. 9
Afb. 9

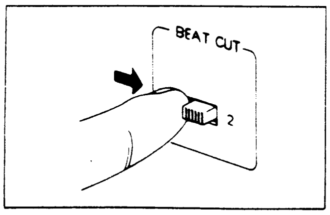
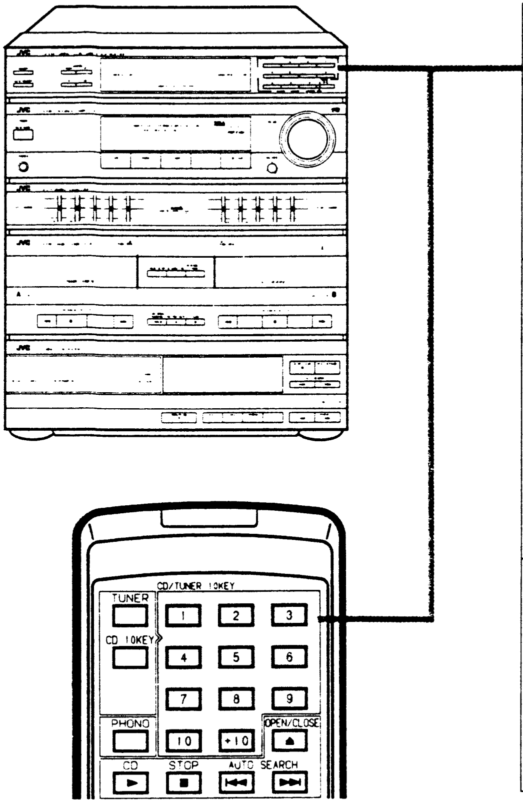


Fig. 10
Abb. 10
Afb. 10



How to use 10 KEYS

To enter 1 to 10: Simply press the appropriate numeric keys.
To enter 11 or higher numbers: Use the "+10" key.
Examples
15: Press "+10," then press "5."
20: Press "+10," then press "10."
25: Press "+10" twice, then press "5."
40: Press "+10" three times, then press "10."

Hoe 10 Key-toetsen gebruiken

Om 1 tot 10 in te voeren:
Druk gewoon op de gepaste cijfertoetsen.
Om 11 of hogere nummers in te voeren:
Gebruik de "+10"-toets.
Voorbeelden
15: Druk op "+10" en dan op "5".
20: Druk op "+10" en dan op "10".
25: Druk tweemaal op "+10" en dan op "5".
40: Druk driemaal op "+10" en dan op "10".

Benutzung der Tasten 1 — 10

Eingabe der Zahlen von 1 bis 10 einfach durch Drücken der entsprechenden Zahlenlasten.
Eingabe de Zahl 11 oder höherer Zahlen durch Drücken der Taste "+10".
Beispiele
15: Taste "+10" und dann Taste "5" drücken.
20: Taste "+10" und dann Taste "10" drücken.
25: Taste "+10" zweimal und dann Taste "5" drücken.
40: Taste "+10" dreimal und dann Taste "10" drücken.

Como utilizar las teclas numéricas

Para introducir un valor comprendio entre 1 y 10: Pulse simplemente las teclas numéricas oportunas.
Para introducir un valor de 11 o superior: Utilice el botón +10.
Ejemplos:
15: Pulse "+10" y, despúes "5".
20: Pulse "+10" y, despúes "10".
25: Pulse "+10" dos veces y, despúes "5".
40: Pulse "+10" tres veces y, despúes "10".

Utilisation des 10 touches

De 1 à 10: Il suffit d'appuyer sur la touche correspondante.
Au delà de 11: Appuyez sur la touche +10.
Exemples:
15: Appuyer sur "+10" puis sur "5".
20: Appuyer "+10" puis sur "10".
25: Appuyer "+10" puis "+10", puis sur "5".
40: Appuyer "+10", "+10", "+10" puis sur "10" etc.

Användning av de 10-tangent

För att ställa in 1 till 11, tryck bara på önskad tangent.
För att ställa in tal högre än 11: Använd +10.
Exempel
15: Tryck "+10" och sedan "5".
20: Tryck "+10" och sedan "10".
25: Tryck "+10" två gånger och sedan "5".
40: Tryck "+10" tre gånger och sedan "10".

How to use the remote control unit

- To use the remote, point it at the REMOTE SENSOR section on the main unit.
- The remote works up to about 7 m apart. (This distance may be reduced if you operate it sidelong.)

Fernbedienung

- Die Fernbedienung auf den FERNSENSOR des CD-Spielers richten.
- Das Gerät kann bis zu einem Abstand von 7 m mit Hilfe der Fernbedienung betätigt werden. (Die Fernbedienung nicht schräg auf den Sensor richten. Dadurch kann d:s Reichweite verkürzt werden.)

Manipulation de la télécommande

- La télécommande ne peut agir que si elle est dirigée vers la partie réceptrice de l'appareil qu'elle doit commander.
- La portée de la télécommande atteint environ 7 mètres; mais cette distance devient plus courte si vous n'êtes pas bien dans l'axe.

Hoe de afstandsbediening gebruiken

- Om de afstandsbediening te gebruiken moet u die naar de REMOTE SENSOR op het apparaat richten.
- De afstandsbediening werkt tot op een afstand van ongeveer 7 m. (Deze afstand kan kleiner worden als u het kastje vanuit een schuine positie op de sensor richt.)

Modo de empleo del mando a distancia

- Para usar el mando a distancia, dirijalo hacia el SENSOR DE CONTROL REMOTO de la unidad principal.
- El mando a distancia tiene un radio de acción de unos 7 metros. (Esta distancia puede ser menor si usted opera desde una posición lateral.)

Hur du använder fjärrkontrollen

- När du använder fjärrkontrollen skall du rikta denna mot huvudenhetens FJÄRRSENSOR.
- Fjärrkontrollen fungerar på upp till sju meters avstånd rakt framifrån.

OPERATION WITH THE REMOTE CONTROL UNIT

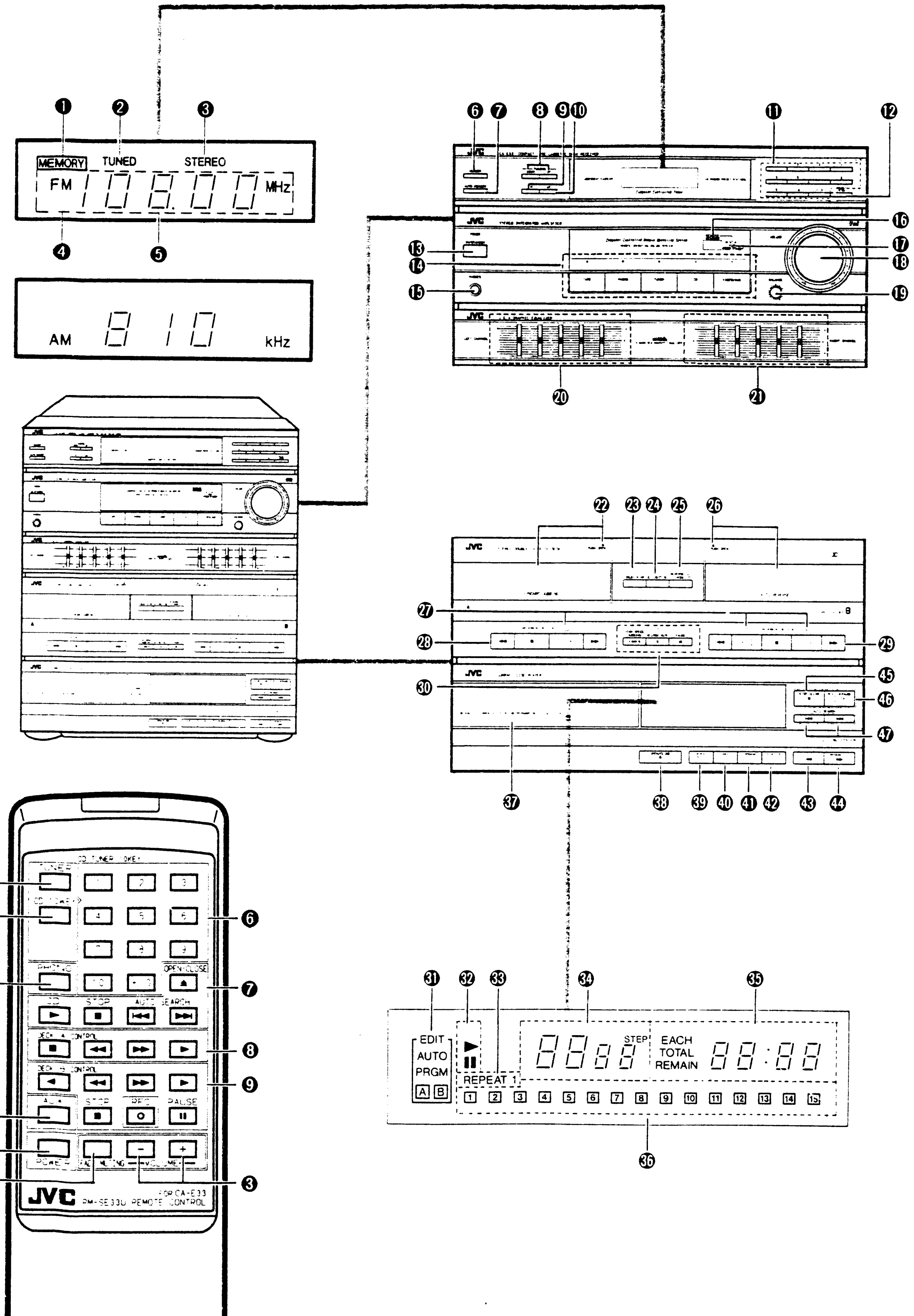
How to use CD/TUNER 10 KEYs

TUNER 10 KEYs

1. Press TUNER button ❹.
2. Pres 10 KEYs.
   - If you have preset a station, you can tune it in instantly by pressing the preset channel number. (Presets are performed on the main unit. See page 27.)

CD 10 KEYs

1. Press CD 10 KEY button ❺.
2. Press 10 KEYs.
   - The 10 KEYs will work as CD 10 KEYs, giving you random access to your favorites on a CD. Also used to vary the length of tape during edit recording.


❶
❷
❸
MEMORY
TUNED
STEREO
FM
MHz
❹
❺
AM
810
kHz
❻
❼
❽
❾
❿
⓫
⓬
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EDIT
AUTO
PRGM
A B
STEP
EACH
TOTAL
REMAIN
REPEAT 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
㊱
CD TUNER KEY
TUNER
CD POWER
PHONO
OPEN/CLOSE
CD
STOP
AUTO SEARCH
DECK A CONTROL
DECK B CONTROL
AUX
STOP
REC
PAUSE
POWER
FADE MUTING
VOLUME
JVC
FOR CA-E33
RM-SE33U REMOTE CONTROL

Instructions for Use

❶ **POWER**
- Turn ON the power to the main unit or let it stand by.

❷ **FADE MUTING**
- Spin the VOLUME dial for a lower sound volume, depending on how many times you press this button.

❸ **VOLUME**
[+] : Press to increase the sound volume.
[−] : Press to reduce the sound volume.

❹ **TUNER**
- Press to tune into broadcasts by using the 10 KEYs as TUNER 10 KEYs.

❺ **CD 10 KEY**
- Press to use the 10 KEYs as CD 10 KEYs.

❻ **10 KEYs**
- The 10 KEYs can be used as TUNER or CD 10 KEYs.

❼ **CD controls**
OPEN/CLOSE (▲) : Withdraws or retracts the disc platter.
CD [▶] : Starts playing a disc.
STOP [■] : Stops playing a disc.
AUTO SEARCH [|◀◀] : Scans a disc backward.
AUTO SEARCH [▶▶|] : Scans a disc forward.
- Disc are scanned continuously while these buttons are pressed continuously.

❽ **DECK A CONTROL**
[▶] : Plays tape.
[■] : Stop tape.
[◀◀] : Fast-winds a tape to the left.
[▶▶] : Fast-winds a tape to the right.

❾ **DECK B CONTROL**
[▶] : Plays the front side of a tape.
[◀] : Plays the reverse side of a tape.
REC [O] : To start tape recording, press the [◀] or [▶] button while holding down this button.
- Muting is operable from the main unit.

PAUSE [II] : Pause playback or recording.
- Press this button and the REC [O] butron at the same time to enter the REC PAUSE mode.
- To resume playback or recording, press the [▶] or [◀] button.
  The [◀◀], [▶▶], and [■] buttons operate the same as those in DECK A CONTROL.

Source selector controls

❿ **PHONO**
Press to listen to a record.

⓫ **AUX**
Press to listen to the sound from the source plugged into the VIDEO/AUX jack.

DESCRIPTION AND FUNCTIONS

Tuner section

❶ **MEMORY indicator**

❷ **TUNED indicator**

❸ **STEREO indicator**

❹ **FM/AM indicator**
"FM" or "AM" lights as an FM or AM broadcast is being received.

❺ **Frequency/channel indicator**
This indicator normally shows a frequency. It displays a channel number when PRESET SCAN button is pressed. When a 10 KEY (preset stations) is pressed. it displays a channel number for about 2 seconds and returns to a frequency display.

❻ **MEMORY**

❼ **AUTO MEMORY**

❽ **TUNING (UP/DOWN)**
Use to tune in an FM or AM broadcast. (See *2. page 23.)
UP: Use to increment the tuned-in frequency.
DOWN: Use to decrement the tuned-in frequency.

❾ **FM**

❿ **AM (CA-E33BK) AM (MW/LW) (CA-E33LBK)**

⓫ **10 KEYs (Preset stations)**
See "How to use 10 KEYs." page 13.

⓬ **PRESET SCAN**

Amplifier section

⓭ **POWER (ON/STANDBY)**
Turns the power ON or activates the STANDBY mode.
STANDBY mode:
Preset data is retained in memory while the power cord is plugged into an AC outlet. If a power failure occurs or the cord is unplugged, data is retained for one or two days before memory is cleared.

Note:
- **A small amount of power (9 watts) is consumed in the STANDBY mode. To switch the power off completely, unplug the power cord.**

⓮ **Source selectors and indicators TAPE, PHONO, TUNER, CD, and VIDEO/AUX**

⓯ **PHONES jack**
Plug headphones into this jack.

Note:
- **Plugging in headphones switches off the sound from the speakers.**

⓰ **REMOTE SENSOR**
This sensor detects the signals transmitted from the remote control unit.

⓱ **RECEIVED indicator**
Lights when this unit receives signals transmitted from the remote control unit.
POWER STANDBY indicator
Lights when POWER is STANDBY MODE.

⓲ **VOLUME**

⓳ **BALANCE**
Balances the sound volumes of the left and right speakers. Normally, leave this knob at the center (click) position.

S.E.A. GRAPHIC EQUALIZER Section

⓴ **LEFT CHANNEL**

㉑ **RIGHT CHANNEL**

Cassette Deck section

㉒ **PUSH OPEN and Cassette holder (Deck A)**

㉓ **DOLBY B NR and indicator (See *3, page 23.)**

㉔ **CD DIRECT REC**

㉕ **REVERSE MODE ⊂⊃ button and indicator**

㉖ **PUSH OPEN and cassette holder (Deck B)**

㉗ **TAPE RUNNING INDICATORS**
Show the status of tape running.

㉘ **Deck A operation buttons (PLAY)**
(◀◀) : Fast-winds tape to the left.
(▶▶) : Fast-winds tape to the right.
(▷) : Plays tape.
(■) : Stop tape.

㉙ **Deck B operation buttons (REC/PLAY)**
(▷) : Plays the front side of tape.
(◁) : Plays the reverse side of tape.
The (◀◀), (▶▶), and (■) buttons operate the same as those in deck A.

㉚ **HIGH SPEED DUBBING (A ▶▶ B) REC/REC MUTE (O) and indicator (deck B only)**
The indicator lights while recording is in progress and flashes while it is muted.
PAUSE (II) (deck B only)
Pauses playback or recording.

CD player section
DISPLAY

㉛ **EDIT indicator**
AUTO: Lights when auto-edit recording is selected.
PRGM: Lights when programmed editing is selected.
[A][B] : Indicates on which side of tape (side A or B) edit recording is in progress.

㉜ **PLAY/PAUSE indicator**
▷ : Lights while the CD player is running.
II : Lights while the CD player is paused.

㉝ **REPEAT indicator**
REPEAT: Lights while the CD player is playing all songs on a disc repeatedly.

REPEAT 1: Lights while the CD player is playing a single song on a disc repeatedly.

● **Selection number/order indicator**
Shows the numbers of songs recorded on a disc and the order of their selection.

● **Time indicator**
When playing: Shows in the order of TOTAL, EACH REMAIN, and EACH.
When editing: Shows in the order of REMAIN and TOTAL REMAIN.
When programming: Shows in the order of TOTAL and EACH.
EACH: Indicates the elapsed play time of each selection.
EACH REMAIN: Indicates the remaining play time of each selection (up to 31 songs).
TOTAL: Indicates the elapsed play time from the beginning of discs, or the elapsed play time of a program.
TOTAL REMAIN: Indicates the remaining total play time of discs, or the remaining time of a program.

● **Program Chart**
Indicates the number of the disc.
The number of the song programmed lights up. (Indicates up to 15 songs.)

● **Disc platter**
Mounts discs.

● **OPEN/CLOSE (▲)**
Withdraws or retracts the disc platter.

● **REPEAT ALL/1**

● **CANCEL**

● **PROGRAM**

● **SIDE A/B**

● **AUTO EDIT (◀◀)**
Works as the AUTO EDIT button when pressed while discs are stopped, or as the fast-rewinds (◀◀) button when pressed while discs are playing.

● **PROGRAM EDIT (▶▶)**
Works as the PROGRAM EDIT button when pressed while discs are stopped, or as the fast-forwards (▶▶) button when pressed while discs are playing.

● **STOP/CLEAR (■)**

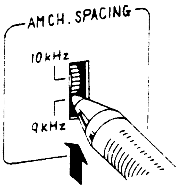
● **PLAY (▷)/PAUSE (❚❚)**
PLAY (▷) : Starts playing a disc.
PAUSE (❚❚) : Pauses a disc when pressed while it is playing.

● **AUTO SEARCH (|◀◀) (▶▶|)**
(|◀◀) : Scans a disc backward.
(▶▶|) : Scans a disc forward.
Discs are scanned continuously while these buttons are pressed continuously.

*1 **Channel spacing**

Band / Area	FM	AM (MW)	AM (LW)
Europe, U.K.	50 kHz	9 kHz	1 kHz
Australia	50 kHz	9 kHz	—
Other areas	50 kHz	9 kHz or 10 kHz	—

An AM channel spacing switch is provided on the rear panel for selecting 9 kHz or 10 kHz steps according to your area (not provided on tuners for the U.K., Australia and Continental Europe).



Example
Beispiel
Exemple
Voorbeeld
Ejemplo
Exempel

Fig. 12
Abb. 12
Afb. 12

To change the AM channel spacing:
First, turn the power on, press the FM button to set to the FM mode, then disconnect the power cord. Wait for a few seconds and switch over the AM channel spacing switch as shown in Fig. 12, using the tip of a ball-point pen.

*2 Pressing the TUNING (UP/DOWN) buttons will sample stations up or down a selected band in the following frequency steps:

	FM	AM/ MW	AM/ LW
CA-E33BK	50 kHz	9 or 10 kHz	—
CA-E33LBK	50 kHz	9 kHz	1 kHz

- Your receiver allow selection between the MW and LW bands while tuning in.
- If your receiver reaches the upper- or lower-limit while scanning with the UP or DOWN button, it reverts to the lower- or upper-limit frequency automatically and continue with scanning further.

*3 Turn the DOLBY B NR-button ON to record with a Dolby system on or to play back a tape recorded on a Dolby system.
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

BASIC OPERATIONS

1. Turn the power on.
ON : Press the POWER button to turn the power ON.

Note:

- **Turn volume to "MIN" before turning power ON.**

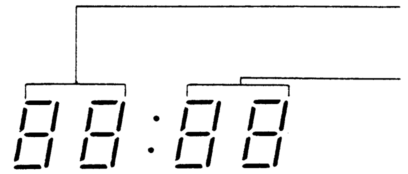
STAND BY: Press the POWER button again to turn the power STAND BY mode. (The indicators lights.)

2. Select a source.
Press a source selector button of your choosing, making sure its indicator lights.
   - To listen to brodcasts:
   Press the TUNER button (see page 27).
   - To listen to discs:
   Press the CD button (see page 33).
   - To listen to tapes:
   Press the TAPE button (see page 37).
   - To listen to records:
   Press the PHONO button (see page 49).
   - Press the VIDEO/AUX button to listen to the sound from the source plugged into the VIDEO/AUX jack (see page 49).
   Operate each component to start playback or recording.
   - When listening to discs or tapes, simply press the associated PLAY (▷ or ◁) button and source will be switched to CD or TAPE automatically.
3. Adjust the sound volume.
Turn the VOLUME control to the MAX side (clockwise) to increase the sound volume, to the MIN side (counterclockwise) to reduce it.
4. Adjust the tone to your liking.
Vertical motion of this S.E.A. GRAPHIC EQUALIZER Control allows you to select five levels of sound quality, from deep base (63 Hz) to treble (16 kHz).

Frequency band	Feature
63 Hz (Deep bass)	Firm, stable tone
250 Hz (Bass)	Powerful, crisp tone
1 kHz (Mean)	Tone full of presence, with sharp vocal sound
4 kHz (Mean treble)	Clear, bright tone
16 kHz (Treble)	Expansive, delicate tone

- The S.E.A. GRAPHIC EQUALIZER control at the "0" position delivers a flat sound.
- Move the control up to enhance tonal effects, down to lessen them.
- Adjust the sound quality for the left and right speakers independently.

Time indicator



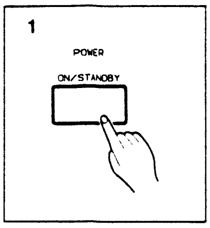
Time indicator
Zeitanzeige
Compteur horaire

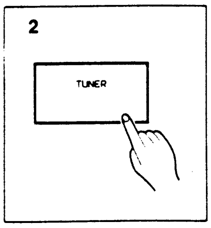
- Indicates the minutes place of the play time of discs.
- Zeigt die Minuten der Platten-Spieldauer an.
- indique les minutes de la durée de lecture des CD.

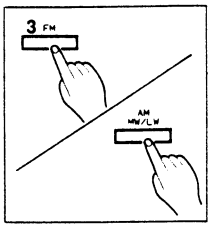
- indicates the seconds place of the play time of discs.
- Zeigt die Sekunden der Platten-Spieldauer an.
- indique les secondes de la durée de lecture des CD.

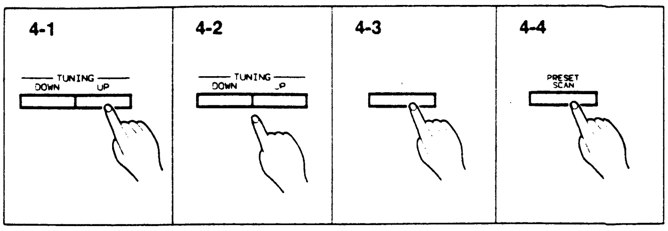
OPERATIONS

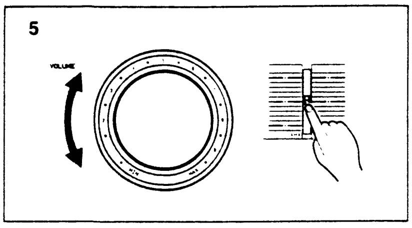
LISTENING TO BROADCASTS

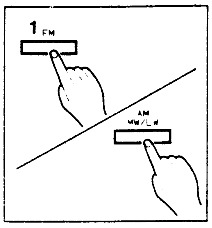


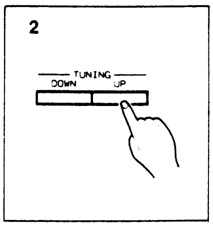


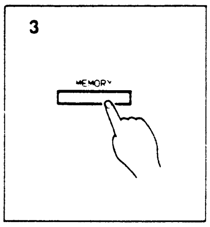


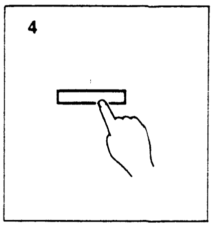












1. Press the POWER button to turn the power ON.
2. Press the TUNER button.
3. Press the FM or AM button.
4. Tune in a station.
   The TUNED indicator will light when your receiver has located broadcast correctly. The STEREO indicator lights to indicate the reception of stereo sound while tuning in an FM broadcast.

4-1. Manual tuning
Hold the TUNING (UP or DOWN) button pressed to sample frequencies continuously, or press once to seek frequencies in predetermined steps. (See *2, page 23.)

4-2. Auto-tuning
Press the TUNING (UP or DOWN) button for longer than 1 second and release, and the receiver will start scanning and halt on reception of a broadcast.

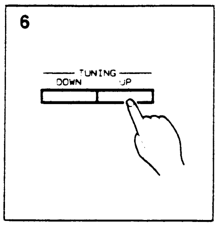
4-3. Preset tuning
Press the preset stations buttons to tune in preset stations. The frequency/channel indicator will revert to the freuency display after displaying a preset channel number for about 2 seconds.

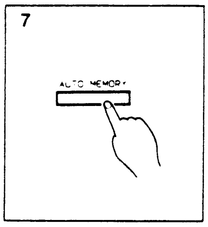
4-4. Preset Scan Tuning
The PRESET SCAN button samples preset stations each for 4 seconds.
When the desired station is located, press the PRESET SCAN button again while the channel number is flashing.

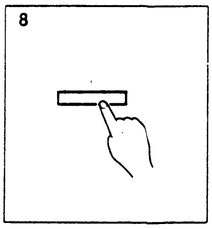
5. Adjust the sound volume and tone to your taste.

To preset stations

1. Press the FM or AM button.
2. Tune in a station with the TUNING (UP or DOWN) button.
3. Press the MEMORY button making sure the MEMORY indicator lights.
4. While the MEMORY indicator is on (for about 5 seconds), press the preset stations button in which you want the station programmed.
5. Repeat Step 1 — 4 above.
   You can program a total of up to 40 FM and AM stations.







Note:

- **You cannot program stations while the MEMORY indicator is off. When the MEMORY indicator is off, press the MEMORY button again.**

Auto memory programming

6. Select the lowest frequency of FM or AM available, or any freuency lower than the frequency you want programmed in memory.
7. Press the AUTO MEMORY button.
   - A channel number will flash for about 5 seconds.
8. While the channel number is flashing, press a desired preset stations button.
   - The selected station is automatically programmed in the preset stations button just pressed.
   - To bypass a station, press the AUTO MEMORY button again while the channel number is flashing and that station will be skipped from being programmed.
   - The search ends when auto memory programming is complete.

Notes:

- **If a new station is programmed in a preset stations button in which another has already been programmed, it will override the existing station preset.**
- **Station presets could be cancelled if the power plug is disconnected from the outlet or power is interrupted. In this case, preset the stations again.**
- **When you want to stop auto memory, press TUNING (up or down) button.**

ABOUT DISCS

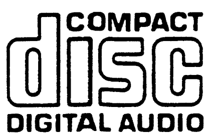


Fig. 13
Abb. 13
Afb. 13

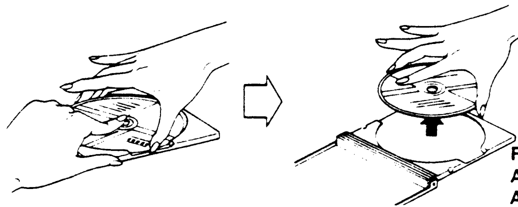


Fig. 14
Abb. 14
Afb. 14

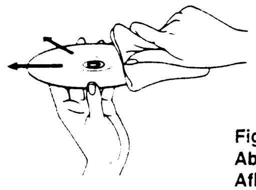
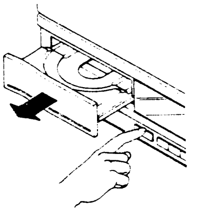


Fig. 15
Abb. 15
Afb. 15

1



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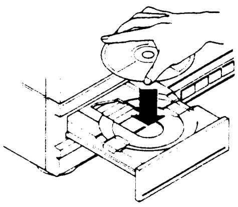

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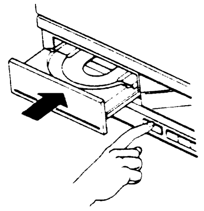


Your CD player can play only those discs that bear the logo shown in Fig. 13.

To demount discs (Fig. 14)

- Lift off the disc while holding down in the center of the case.

To clean discs (Fig. 15)

- Remove fingerprints or dust from the surfaces of discs by wiping off lightly with a soft, dry cloth from center to outside.
- Never wipe discs in the circumferential direction.
- Never use record cleners, record sprays, or solvents, such as thinner and benzine, to clean discs.

To mount discs

1. Press the OPEN/CLOSE (▲) button.
2. Mount a disc at the center of the disc platter, label side face-up.
3. Press the OPEN/CLOSE (▲) button to retract the disc platter.

Note:

- **When the playback is ended, press the OPEN/CLOSE (▲) button to demount the disc.**

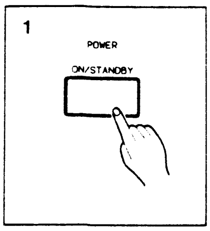
To handle discs

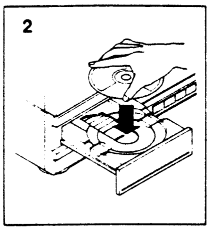
- Never leave scratches on the surfaces of discs. Failure to read signals, or noise, might result.
- Never stain the recorded sides (mirror surfaces) of discs or affix paper, adhesive tapes, or similar material to the label sides.
- Do not allow discs to be warped. Otherwise, malfunctions could result.

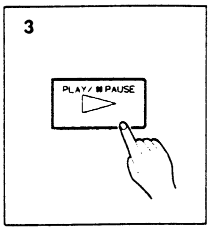
To store discs

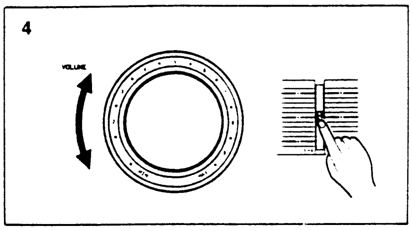
- Store discs in dedicated cases to defend against scratches, damage, deformation, etc.; never place discs in places that are exposed to direct sunlight, dusty, near heaters, or in automobiles.

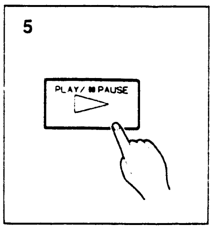
LISTENING TO DISCS

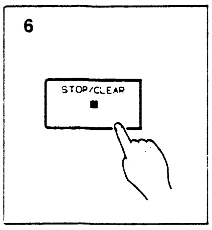


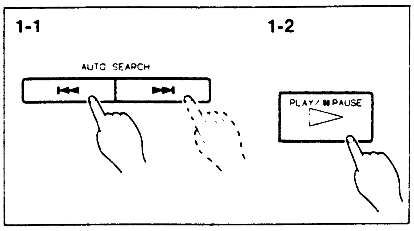


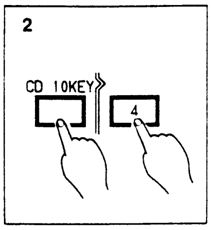












1. Press the POWER button to turn the power ON.
2. Mount a disc. (Label side face up)
3. Press the PLAY (▷)/PAUSE (❚❚) button. (The source will be switched to CD automatically and the CD player starts playing songs on the disc in sequence.)
4. Adjust the sound volume and tone to your taste.

To pause playing

5. Press the PLAY (▷)/PAUSE (❚❚) button.
   - To resume playing, press the PLAY (▷)/ PAUSE (❚❚) button again.

To stop playing

6. Press the STOP/CLEAR (■) button.

Two ways to let the CD player play your favorites.

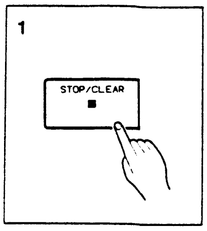
1-1. Press the song numbers with the AUTO SEARCH (⏮) or (⏭) button.
1-2. Press the PLAY (▷)/PAUSE (❚❚) button. (The CD player will start playing the selected song.)
2. Press the song numbers with the CD 10 KEYs on the remote control unit.
   - The CD player will start playing the selected songs automatically.

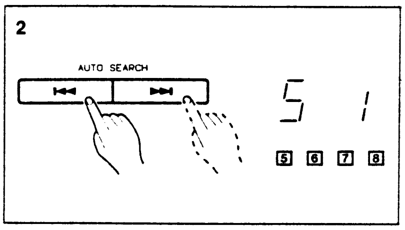
How to use the AUTO SEARCH (⏮) or (⏭) button during disc play

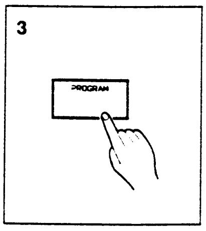
- Press momentarily, then release.
  ⏭ : Locates the beginning of the next song.
  ⏮ : Locates the beginning of the song being played.
- Discs are scanned continuously while these buttons are pressed continuously.

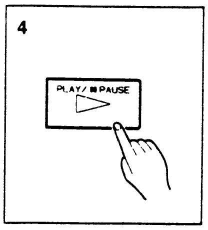
Notes:

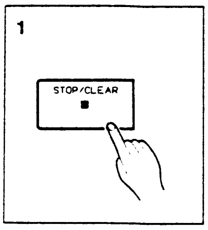
- **Sound volume control**
  Discs contain much less noise than analog records and tapes. If the sound volume is adjusted to a quiet portion of a song, an unexpectedly tound sound could be generated, causing damage to the speakers.
  To prevent this risk, remember to minimize the sound volume before starting to play a disc.
- **Dew condensation**
  It sometimes happens in a cold season that dew is condensed inside the system immediately after the room heater is turned on, disabling normal system performance. In this case, demount the disc and leave it to stand at room temperature for hours. If the system failures still persists, call your dealer.

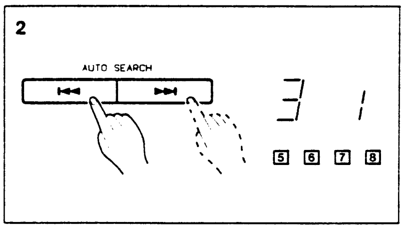


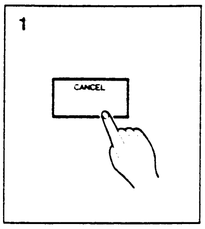


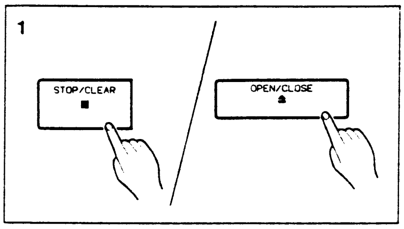












Programmed play

1. Press the STOP/CLEAR (■) button.
2. Press to indicate the number of the songs you want to listen to with the AUTO SEARCH (⏮) or (⏭) button.
3. Press the PROGRAM button.
   - Repeat the same procedure of 2 and 3 for the rest of your favorite program.
4. Press the PLAY (▷)/PAUSE (❚❚) button. (The CD will start playing the songs you have selected in the programmed order.)

Reprogramming

Complete renewal of song numbers

1. Stop playing and press the STOP/CLEAR (■) button.
2. Perform Steps 2 and 3 above.

Erasure of song numbers

1. Press the CANCEL button.
   - Each time you press the CANCEL button, the programmed songs are erased from the last one forward.

Cancellation

1. Stop playing and press the STOP/CLEAR (■) button or OPEN/CLOSE (▲) button.

Notes:

- **You can program maximum 32 songs.**
- **You cannot change a program during playing.**

Repeated plays

Press the REPEAT ALL/1 button before or while the CD player is playing a disc.

Repeat all songs: Press once (The REPEAT indicator lights).

Repeat one song: Press twice (The REPEAT 1 indicator lights).

Cancellation: Turn off the REPEAT indicator.

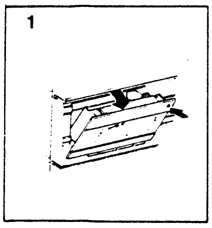
- Each time you press the REPEAT ALL/1 button, the lit indicator changes from REPEAT to REPEAT 1 and further to off state.

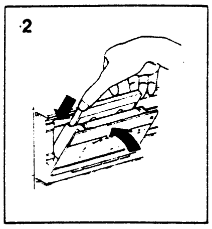
Manual search

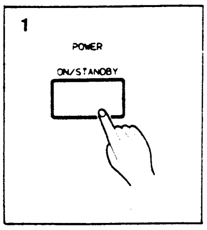
Fast-forward: Press the PROGRAM EDIT button (▶▶) while the CD player is playing a disc.

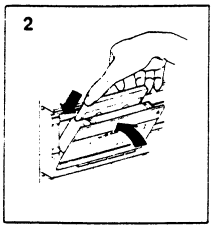
Fast-rewind: Press the AUTO EDIT (◀◀) button while the CD player is playing a disc.

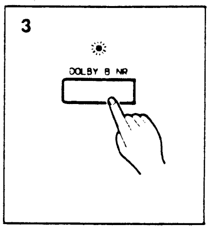
LISTENING TO TAPES, RECORDING, DUBBING

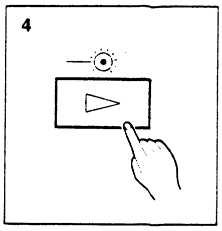


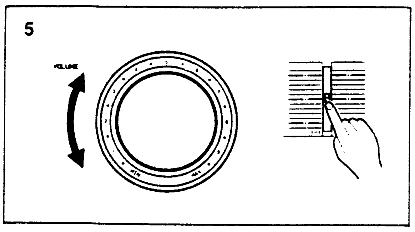


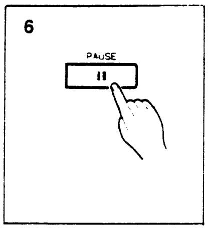


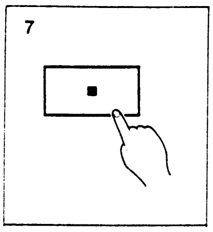


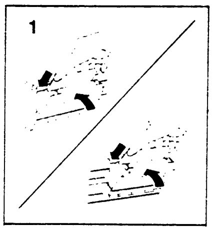


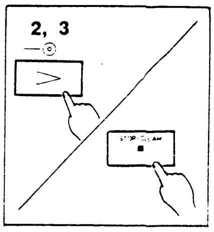












- Your receiver is designed to accept normal and chrome tapes only. (The type of tape you use is automatically detected by the auto-tape selection feature.)
- Recording can be made only wit deck B, but playing is available with both decks A and B.

To load tapes

1. Press the PUSH OPEN (▲) to open the cassette holder.
2. Load a tape and close the cassette holder. Set with the tape facing downward.
   - When the tape has finished playing, press the PUSH OPEN (▲) to unload the tape.

LISTENING TO TAPES

1. Press the POWER button to turn the power ON.
2. Load a tape.
3. When listening to a tape that has been recorded on a Dolby system, set the DOLBY B NR button ON, making sure its indicator lights. (See *3, page 23.)
4. Press the (▷) or (◁) button.
   - The source will be switched to TAPE automatically.
5. Adjust the sound volume and tone to your taste.

To pause (Deck B only)

6. Press the PAUSE (❚❚) button.
   - To resume the play, press either the (▷) or (◁) button.

To stop

7. Press the (■) button.
   - Auto reverse feature (deck B only)
     Press the REVERSE MODE ↻ button to turn its indicator on or off.
     On: The tape deck repeatedly plays both sides of a tape.
     Off: The tape deck plays one side of a tape, and stops.
     - Each time you press the button, the indicator toggles between on and off states.

Continuous playing

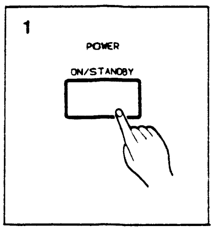
- Your receiver is equipped with the continuous playing mode.

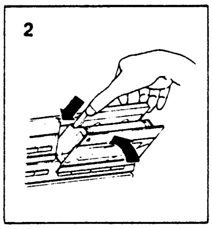
1. Load a tape to deck A and deck B.
2. Press the (◁) or (▷) button.
   - When one side of the deck finished playing, the other side automatically starts playing and repeatedly plays both deck A and B.
   - When the tape finishes playing, it automatically re-wound.
   - Press the REVERSE MODE button to play both sides of deck B, then play deck A.
3. Press the (■) button to stop.

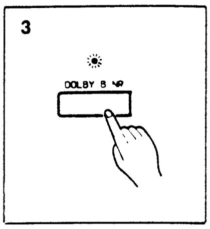
Notes:

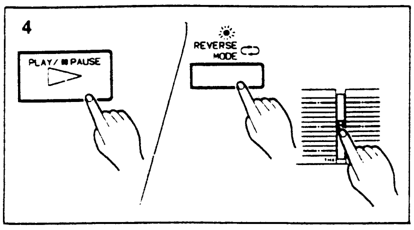
- **When loading the tape to both deck A and B, the deck automatically plays in continuous playing mode.**
- **Before turning the power OFF, be sure to release the cassette deck's playback or recording mode.**

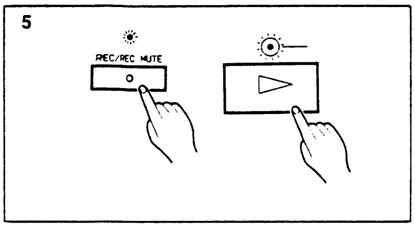
RECORDING (Deck B only)

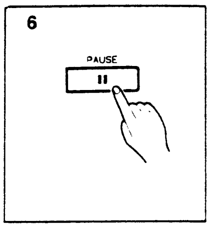


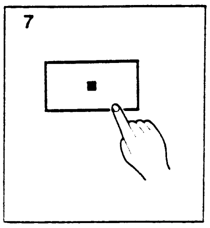












- The built-in auto level control circuit in the receiver saves you the trouble of adjusting the recording level.
- Spins of the VOLUME and BALANCE control during recording will have no effects up on recording (including dubbing).
- Set the SEA knob to FLAT when not SEA recording.

1. Press the POWER button to turn the power ON.
2. Load a tape on deck B.
3. To record the tape with a Dolby system on, set the DOLBY B NR button ON, making sure its indicator lights. (See *3, page 23.)
4. Play back the source to record. (PHONO, TUNER, CD, VIDEO/AUX)
   - Press the REVERSE MODE ⊂⊃ button to turn its indicator on or off.

   On: Reciprocal recording from side A to side B.

   Off: One-sided recording.
   - Set the SEA knob to any position for SEA recording.
5. Press the (▷) or (◁) button while holding down the REC/REC MUTE (O) button, or press the REC/REC MUTE button and the MUTE (O) at the same time to set the deck in PAUSE mode. and press the (▷) or (◁) button to start recording.

To pause recording

6. Press the PAUSE (▮▮) button.
   - To resume recording, press the (▷) or (◁) button.

To stop recording

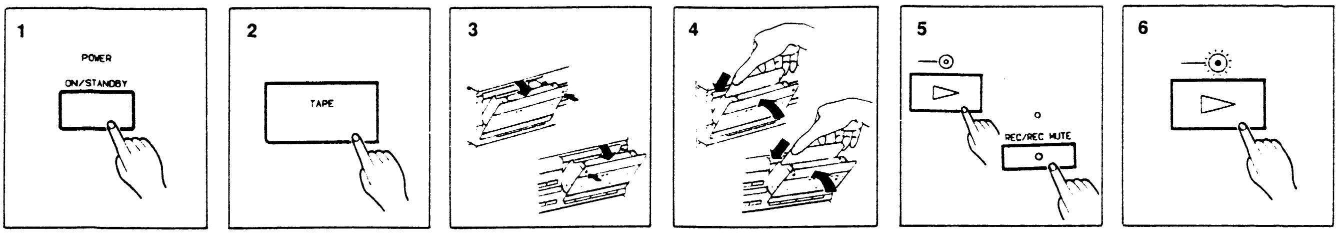
7. Press the (■) button.

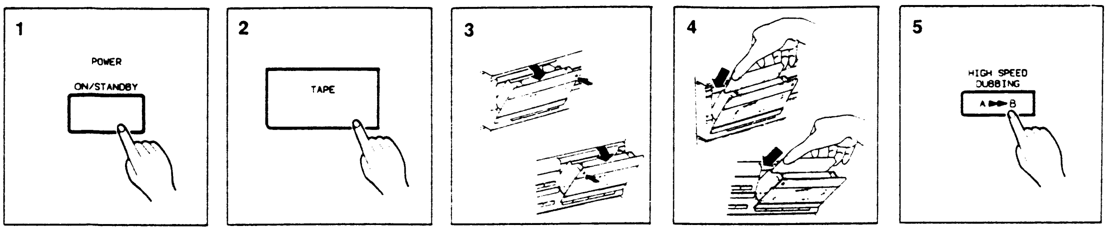
About S.E.A. recording

You can create a custom sound tape with sound quality varied to your liking by controlling the S.E.A. graphic equalizer during recording.

- S.E.A. recording does not work on dubbing.
- If you wish the S.E.A. effect for recording operations other than dubbing, complete the S.E.A. procedures before the recording operation.

DUBBING (from deck A to deck B)





Normal dubbing

1. Turn the POWER switch ON.
2. Press the TAPE button.
3. Press PUSH OPEN (▲) on decks A and B to open their cassette holders.
4. Load a play tape in deck A and a recording tape in deck B.
5. Set deck B in record mode. (Press the (▷) button while holding down the REC / REC MUTE (O) button.)
6. Set deck A in play mode. (Press the (▷) button.)

High-speed dubbing

1. Turn the POWER switch ON.
2. Press the TAPE button.
3. Press PUSH OPEN (▲) on decks A and B to open their cassette holders.
4. Load a play tape in deck A and a recording tape in deck B.
5. Press the HIGH SPEED DUBBING (A ▶▶ B) button.

To stop dubbing

Normal dubbing: Press the (■) buttons on decks A and B.

High-speed dubbing: Press the (■) button on deck B.

Notes:

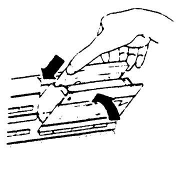
- **Before dubbing is made, check the running direction of deck B by the TAPE RUNNING INDICATOR. To change (◁) to (▷), while holding down (■) button, press (▷) button.**
- **With the Dolby system on, tapes are recorded in the same Dolby mode as the prerecorded tape had been recorded, regardless of whether the DOLBY B NR button is ON or OFF. (The DOLBY B NR indicator is off while dubbing is in progress.)**
- **In high-speed dubbing, tape recording is independent of the source selector position, as well as the sound volume and tone settings, so you can listen to a source other than TAPE while dubbing. (If a source selector button other than TAPE is pressed during normal-speed dubbing, that source will be recorded.)**
- **S.E.A. recording is not possible during normal or high speed dubbing.**

Notes for dubbing:

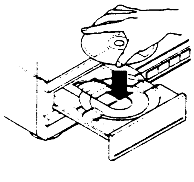
- **As the tape length for recording may not be enough due to differences in tapes speed between deck A and deck B and variations in tape length etc., use a tape with enough length for recording.**
- **Certain televisions may be affected by this unit during high-speed dubbing. If this happens, turn the power of the TV off or move this unit away from the TV.**

When recording a tune (TAPE) while monitoring it, use normal dubbing. When listening to a source other than the tape being recorded, high-speed dubbing is convenient.

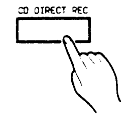
A-1



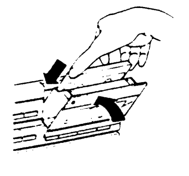
A-2



A-3



B-1



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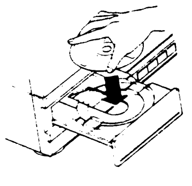

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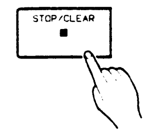

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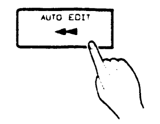

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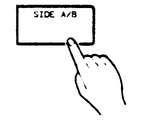

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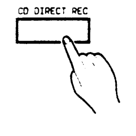
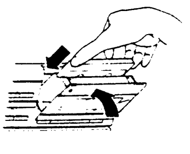
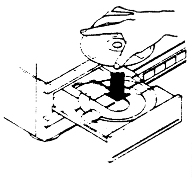


C-1



C-2



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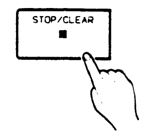

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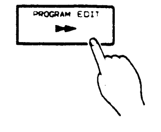

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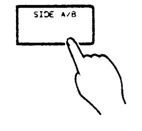

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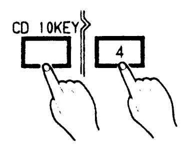

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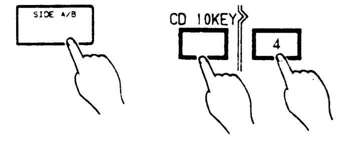
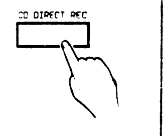


C-8



CD direct recording (deck B only)

- You can easily record a disc onto a tape synchronized with it. Three ways of direct recording are:

A. Record a disc direct.

1. Load a tape in deck B.
   - To record on both sides of the tape, press the REVERSE MODE ⊂⊃ button to turn its indicator on.
2. Mount a disc on the CD player.
3. Press the CD DIRECT REC button.

Note:
• The source is automatically fixed at CD during direct recording. To switch to another source, press the STOP (■) button on deck B or the CD player.

B. Record a disc by auto-editing.

- The tape deck records the songs on the disc automatically distributed on sides A and B of the tape.

1. Load a tape in deck B.
2. Mount a disc on the CD player.
3. Press the STOP/CLEAR (■) button.
4. Press the AUTO EDIT (◀◀) button.
   - A flashing indicator suggests the tape length fit to the disc mounted.
   - Each time you press the AUTO EDIT (◀◀), the flashing tape length indicator will change in the following sequence:

     C46 → C54 → C60 → C74 → C90

   - Press the button to meet the length of the tape you have loaded.
   - You may modify the tape length with the remote control unit CD 10 KEYs.
   - To record on both sides of the tape, press the REVERSE MODE ⊂⊃ button to turn its indicator on.
5. Press the SIDE A/B button to select between sides A and B of the tape.
   - The songs to enter side A or B are selected automatically. (The ⊏ mark lights.)
6. Press the CD DIRECT REC button.

C. Record a disc by programmed editing.

- Choose your favorites from a disc and program them in the order you like.

1. Load a tape in deck B.
2. Mount a disc on the CD player.
3. Press the STOP/CLEAR (■) button.
4. Press the PROGRAM EDIT (▶▶) button.
   - A flashing indicator suggests the tape length fit to the disc mounted.
   - Each time you press the PROGRAM EDIT (▶▶), the flashing tape length indicator will change in the following sequence:

     C46 → C54 → C60 → C74 → C90

   - Press the button to meet the length of the tape you have loaded.
   - You may modify the tape length with the remote control unit CD 10 KEYs.
5. Press the SIDE A/B button to select between sides A and B of the tape.
   - The maximum duration of recording permitted on one side is displayed.
6. Programs the songs you want to record with the remote control unit CD 10 KEYs.
   - The time indicator will begin flashing when the maximum recording duration is exceeded. (Press the CANCEL button to erase from the last song.)
   - The setup for one-sided recording is now complete. Step 7 is not needed unless you record on the other side.
7. Press the SIDE A/B button again to select the other side and repeat Step 6.
8. Press the CD DIRECT REC button.

Notes for edit recording:

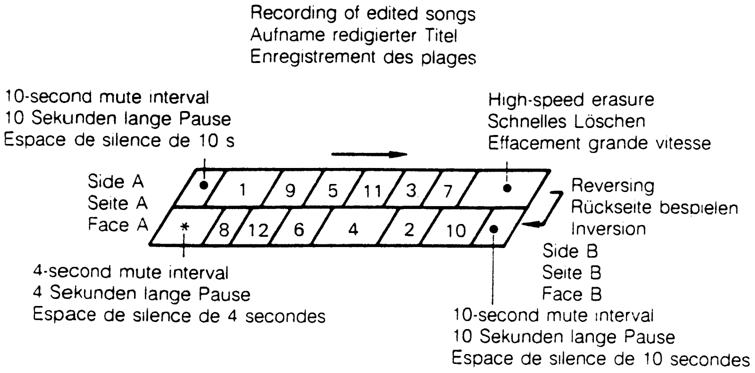
- **How to use CD 10 KEYs, see page 13.**
- **You can record up to 16 songs on one side of a tape.**
- **You can program maximum 32 songs.**

Notes on edit recording

- **The CD DIRECT REC button starts edit recording automatically in the following manners:**

Example:

Side A. 1. 9. 5. ...; side B. 10. 2. 4. ...


Recording of edited songs
Aufname redigierter Titel
Enregistrement des plages
10-second mute interval
10 Sekunden lange Pause
Espace de silence de 10 s
High-speed erasure
Schnelles Löschen
Effacement grande vitesse
Side A
Seite A
Face A
•
1
9
5
11
3
7
•
Reversing
Rückseite bespielen
Inversion
*
8
12
6
4
2
10
•
Side B
Seite B
Face B
4-second mute interval
4 Sekunden lange Pause
Espace de silence de 4 secondes
10-second mute interval
10 Sekunden lange Pause
Espace de silence de 10 secondes

- After programming sides A and B, press the CD DIRECT REC button to start edit recording automatically.
- Even when the end of the tape is not reached, the tape is fast-forwarded to the beginning of side B and a 4-second mute interval is created to prevent the beginning of the next song from being cut out.
- When the programmed recording sequence is complete, the tape stops after a 4-second mute interval.

REC MUTE (deck B only)

- To create a 4-second mute interval during recording.

1. To create a mute interval during recording, touch the REC/REC MUTE button.
   - About 4-second mute interval is automatically created and sets in REC MUTE mode.
2. To resume recording, press the (▷) or (◁) button.

Note:

- **When you want to create a mute interval of over 4-second, hold down the REC/REC MUTE button desired time. Releasing this button sets in REC PAUSE mode.**

ERASING

Recording on a cassette automatically erases the previous sound.
To erase without making a new recording, set the source selector to the TAPE position. Then, set deck B in the recording mode.

LISTENING TO RECORDS

1. Press the POWER button to turn the power ON.
2. Press the PHONO button.
3. Play a record.
   - Refer to the instructions manual pertaining to the record player.
4. Adjust the sound volume and tone to your taste.

Listen to the source of the component plugged into the VIDEO/AUX jack.

5. Press the VIDEO/AUX button.
   - Read the instruction manual for the component plugged in.

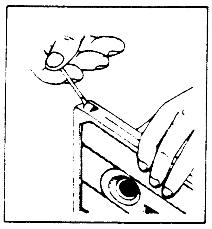


Fig. 16
Abb. 16
Afb. 16

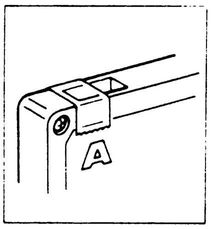


Fig. 17
Abb. 17
Afb. 17

Note:

- **Cassette tapes have safety lugs. Valuable recordings can be protected from accidental erasure by cutting there lugs. To protect side A from erasure, for example, cut the lug on the left when viewwed form side A; to protect side B from erasure, cut the lug on the left when viewed from side B (Fig. 16).**
  To record on tapes with their lugs having been cut, cover the voids with an adhesive tape or the like and you can record on them over again (Fig. 17).

CASSETTE TAPE

- **Tape type**

The following two types of tape can be used for this unit.

- NORMAL (TYPE I)
- CHROME (TYPE II)

Note:

- **Using a Metal (TYPE IV) or Ferri-chrome tape is not recommended because this unit does not have the required characteristics.**

MAINTENANCE

Head cleaning

Head cleaning is required to assure optimum performance. The heads which come into contact with the tape attract minute particles of dust and become dirty.

If the heads are dirty .....

- Sound quality becomes poor.
- The sound level drops.
- Recording becomes impossible.
- Sound is interrupted.
- Previous recordings are not erased.

Because of this, keep the heads clean.

Wipe the heads with a cleaning stick or cloth moistened with alcohol (not too much).

Notes:

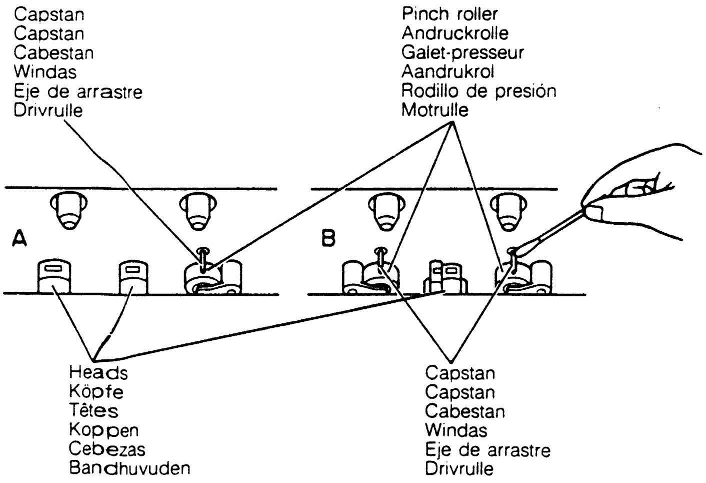
- **Do not bring any iron object, magnet screwdriver, etc. close to the heads.**
- **Do not use force so the right head positions are kept.**
- **Make sure to turn the power off when cleaning.**

Cleaning the pinch roller and capstan

Wipe the pinch roller and capstan referring to "Head cleaning".

Demagnetizing

If the heads become magnetized, noise will occur and high frequency response will deteriorate. In this case, set the POWER button to OFF and demagnetize the heads with a head demagnetizer. For more details, refer to the instruction book of the demagnetizer.



SPECIFICATIONS

AMPLIFIER SECTION

Output power: (DIN)
30 watts per channel min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.9% total harmonic distortion.
MUSIC DIN : 55 W + 55 W

Input sensitivity/impedance
PHONO : 3 mV/50 kohms
VIDEO/AUX : 300 mV/50 kohms

S.E.A. graphic equalizer
Center frequencies : 63 Hz, 250 Hz, 1 kHz, 4 kHz, 16 kHz
Control range : +10 dB ±1 dB, −10 dB ±1 dB

FM TUNER SECTION

Tuning range : 87.5 MHz — 108.0 MHz
Usable sensitivity : 0.95 µV/75 ohms (IHF)
26 dB Quieting sensitivity : 1.5 µV/75 ohms (DIN)
Signal to noise ratio : Mono 80 dB (IHF A-net)
Stereo 73 dB (IHF A-net)
Mono 72 dB (DIN)
Stereo 64 dB (DIN)

AM TUNER SECTION

MW

Tuning range
Channel space 9 kHz : 522 kHz — 1629 kHz (for UK, Australia, Continental Europe)
531 kHz — 1602 kHz (for other area)
Channel space 10 kHz : 530 kHz — 1600 kHz
: (for other area)
Sensitivity : 300 µV/m (at 1000 kHz or 999 kHz)

LW (CA-E33LBK only)

Tuning range : 144 kHz — 353 kHz
144 kHz — 290 kHz (for Italy only)
Sensitivity : 600 µV/m (at 245 kHz)

CASSETTE SECTION

Head Deck A : Metaperm (play)
Deck B : Metaperm (play/rec)
Ferrite (erase)
Frequency response : Normal tape:
30 Hz — 16 kHz
(−20 dB rec/play)
Chrome tape
30 Hz — 17 kHz
(−20 dB rec/play)
Wow and flutter : 0.08% (WRMS), 0.2% (DIN)
Signal to noise ratio : 57 dB (chrome tape)

CD PLAYER SECTION

System : Compact disc player
Signal detection system : Non-contact optical system pick-up
Number of channels : 2 channels
Signal to noise ratio : 100 dB
Wow and flutter : Less than measurable limit
Number of program steps : 32 steps

GENERAL

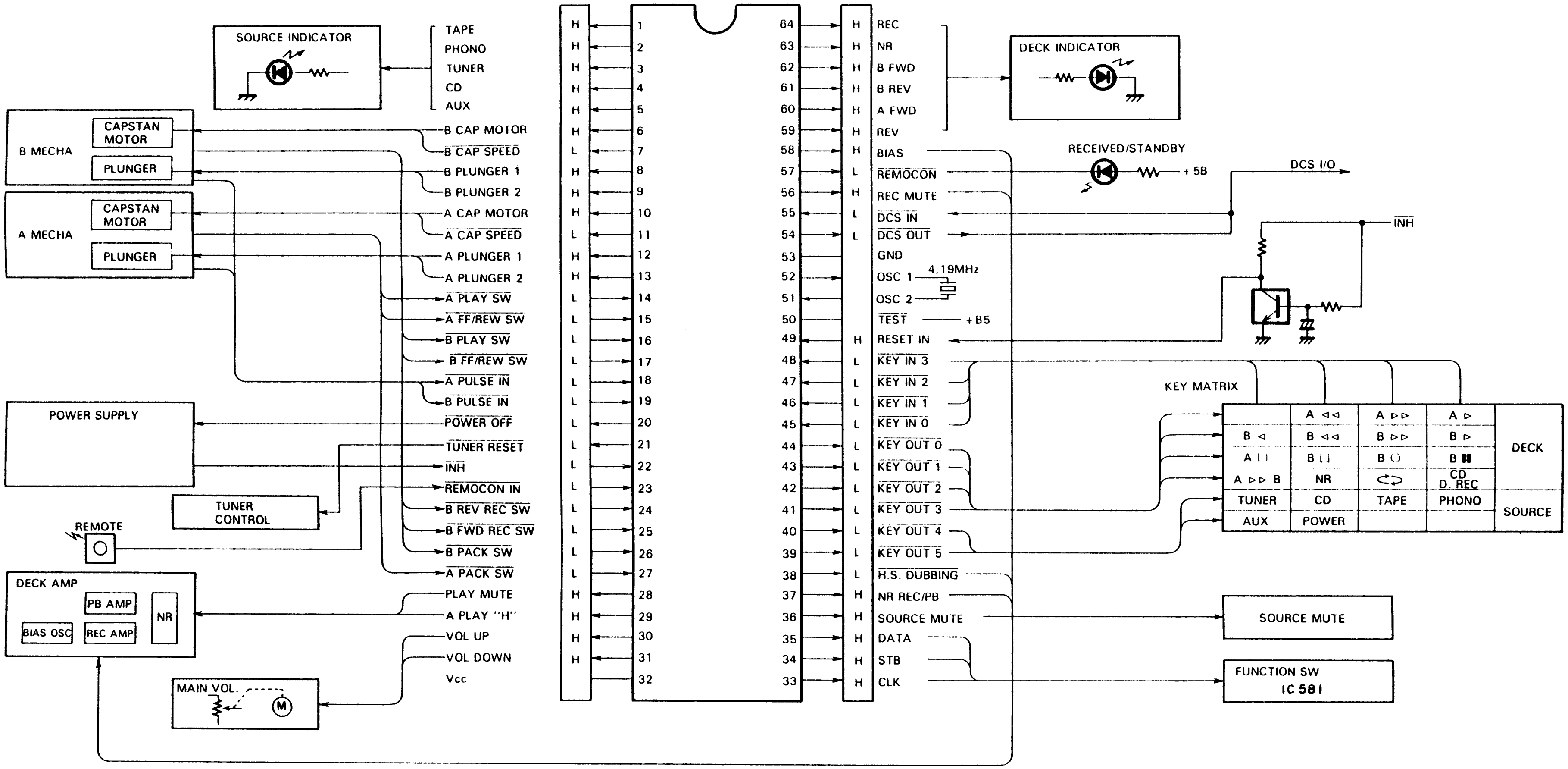
Dimensions : 360(W) x 417(H) x 336(D) mm (14-3/16" x 16-7/16" x 13-1/4")
Weight : 9.3 kg (20.5 lbs)

Design and specifications subject to change without notice.

POWER SPECIFICATIONS

Area	Line Voltage & Frequency	Power Conumption
UK	AC 240 V ∿, 50 Hz	225 watts
Australia		
Continental Europe	AC 220 V ∿, 50 Hz	115 watts
Other areas	AC 110 / 127 / 220 / 240 V ∿ selectable, 50/60 Hz	

Explnation of System Control IC

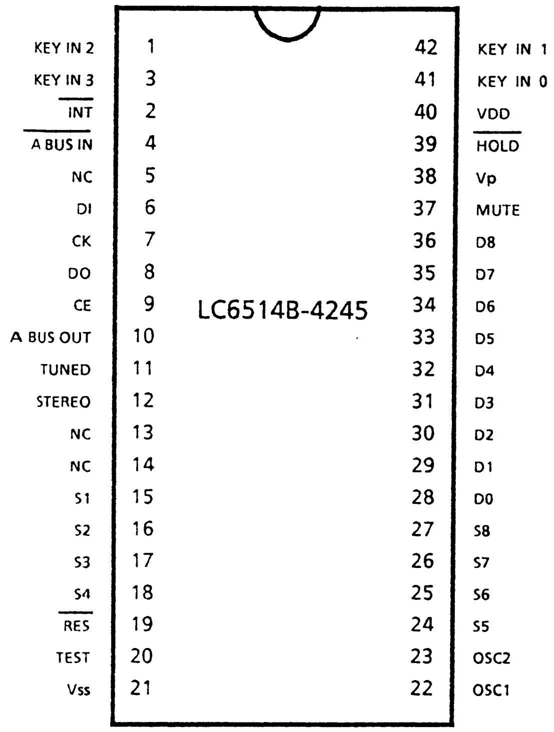

SOURCE INDICATOR
B MECHA
CAPSTAN MOTOR
PLUNGER
A MECHA
CAPSTAN MOTOR
PLUNGER
POWER SUPPLY
TUNER CONTROL
REMOTE
DECK AMP
PB AMP
BIAS OSC
REC AMP
NR
MAIN VOL.
M
1 H TAPE
2 H PHONO
3 H TUNER
4 H CD
5 H AUX
6 H B CAP MOTOR
7 L B CAP SPEED
8 H B PLUNGER 1
9 H B PLUNGER 2
10 H A CAP MOTOR
11 L A CAP SPEED
12 H A PLUNGER 1
13 H A PLUNGER 2
14 L A PLAY SW
15 L A FF/REW SW
16 L B PLAY SW
17 L B FF/REW SW
18 L A PULSE IN
19 L B PULSE IN
20 L POWER OFF
21 L TUNER RESET
22 L INH
23 L REMOCON IN
24 L B REV REC SW
25 L B FWD REC SW
26 L B PACK SW
27 L A PACK SW
28 H PLAY MUTE
29 H A PLAY "H"
30 H VOL UP
31 H VOL DOWN
32 Vcc
64 H REC
63 H NR
62 H B FWD
61 H B REV
60 H A FWD
59 H REV
58 H BIAS
57 L REMOCON
56 H REC MUTE
55 L DCS IN
54 L DCS OUT
53 GND
52 OSC 1
51 OSC 2
4,19MHz
50 TEST +B5
49 H RESET IN
48 L KEY IN 3
47 L KEY IN 2
46 L KEY IN 1
45 L KEY IN 0
44 L KEY OUT 0
43 L KEY OUT 1
42 L KEY OUT 2
41 L KEY OUT 3
40 L KEY OUT 4
39 L KEY OUT 5
38 L H.S. DUBBING
37 H NR REC/PB
36 H SOURCE MUTE
35 H DATA
34 H STB
33 H CLK
DECK INDICATOR
RECEIVED/STANDBY
+5B
DCS I/O
INH
KEY MATRIX
A ◁◁
A ▷▷
A ▷
B ◁
B ◁◁
B ▷▷
B ▷
A ( )
B ( )
B ( )
B ▮▮
A ▷▷ B
NR
CD D. REC
DECK
TUNER
CD
TAPE
PHONO
AUX
POWER
SOURCE
SOURCE MUTE
FUNCTION SW
IC 581

EXPLANATION OF SYSTEM CONTROL IC
HD614081-SB47 (IC501)

Discription of Major ICs

LC6514B-4245 (IC401) : TUNER CONTROLLER

1. Terminal Layout


LC6514B-4245
KEY IN 2 1
KEY IN 3 3
INT 2
A BUS IN 4
NC 5
DI 6
CK 7
DO 8
CE 9
A BUS OUT 10
TUNED 11
STEREO 12
NC 13
NC 14
S1 15
S2 16
S3 17
S4 18
RES 19
TEST 20
Vss 21
42 KEY IN 1
41 KEY IN 0
40 VDD
39 HOLD
38 Vp
37 MUTE
36 D8
35 D7
34 D6
33 D5
32 D4
31 D3
30 D2
29 D1
28 D0
27 S8
26 S7
25 S6
24 S5
23 OSC2
22 OSC1

2. Key Matrix

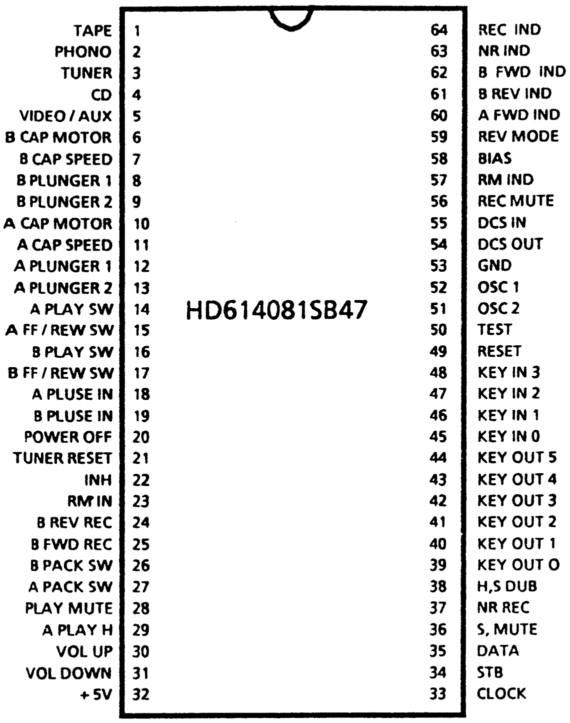
	KEY IN 0	KEY IN 1	KEY IN 2	KEY IN 3
D0		MEMORY	AUTO MEMORY	
D1	FM	AM		
D2	UP	DOWN		
D3	1	2	3	4
D4	5	6	7	8
D5	9	10	+10	PRESET SCAN

3. Pin Functions

Pin No.	Symbol	I/O	Function and Operation	Pin No.	Symbol	I/O	Function and Operation
1	KEY IN 2	I	KEY MATRIX INPUT	22	OSC1		OSCILLAFION INPUT
2	KEY IN 3	I	〃	23	OSC2		OSCILLAFION OUTPUT
3	INT	I	PULL UP (+5V)	24	S5	O	FL SEGMENT OUTPUT
4	A BUS IN	I	DCS SIGNAL INPUT	25	S6	O	〃
5	NC			26	S7	O	〃
6	DI	I	DATA INPUT	27	S8	O	〃
7	CK	O	SYSTEM CLOCK OUTPUT	28	D0	O	FL GRID OUTPUT (KEY MATRIX OUTPUT)
8	DO	O	DATA OUTPUT	29	D1	O	〃
9	CE	I	CHIP ENABLE	30	D2	O	〃
10	A BUS OUT	O	DCS SIGNAL OUTPUT	31	D3	O	〃
11	TUNED	I	"TUNED" SIGNAL INPUT	32	D4	O	〃
12	STEREO	I	"STEREO" SIGNAL INPUT	33	D5	O	〃
13	NC			34	D6	O	〃
14	NC			35	D7	O	〃
15	S1	O	FL SEGMENT OUT PUT	36	D8	O	〃
16	S2	O	〃	37	MUTE	O	
17	S3	O	〃	38	Vp		FL DISPLAY POWER SUPPLY
18	S4	O	〃	39	HOLD	I	INPUT SIGNAL FOR BACK UP
19	res	I	RESET SIGNAL INPUT	40	VDD		POWER SUPPLY (+5V)
20	TEST	I	PULL DOWN	41	KEY IN 0	I	KEY MATRIX INPUT
21	Vss		GND	42	KEY IN 1	I	〃

■ HD614081SB47(IC501) : DECK SYSTEM CONTROLLER

1. Terminal Layout


HD614081SB47
TAPE 1
PHONO 2
TUNER 3
CD 4
VIDEO / AUX 5
B CAP MOTOR 6
B CAP SPEED 7
B PLUNGER 1 8
B PLUNGER 2 9
A CAP MOTOR 10
A CAP SPEED 11
A PLUNGER 1 12
A PLUNGER 2 13
A PLAY SW 14
A FF / REW SW 15
B PLAY SW 16
B FF / REW SW 17
A PLUSE IN 18
B PLUSE IN 19
POWER OFF 20
TUNER RESET 21
INH 22
RM IN 23
B REV REC 24
B FWD REC 25
B PACK SW 26
A PACK SW 27
PLAY MUTE 28
A PLAY H 29
VOL UP 30
VOL DOWN 31
+5V 32
64 REC IND
63 NR IND
62 B FWD IND
61 B REV IND
60 A FWD IND
59 REV MODE
58 BIAS
57 RM IND
56 REC MUTE
55 DCS IN
54 DCS OUT
53 GND
52 OSC 1
51 OSC 2
50 TEST
49 RESET
48 KEY IN 3
47 KEY IN 2
46 KEY IN 1
45 KEY IN 0
44 KEY OUT 5
43 KEY OUT 4
42 KEY OUT 3
41 KEY OUT 2
40 KEY OUT 1
39 KEY OUT 0
38 H,S DUB
37 NR REC
36 S, MUTE
35 DATA
34 STB
33 CLOCK

2. KEY matrix

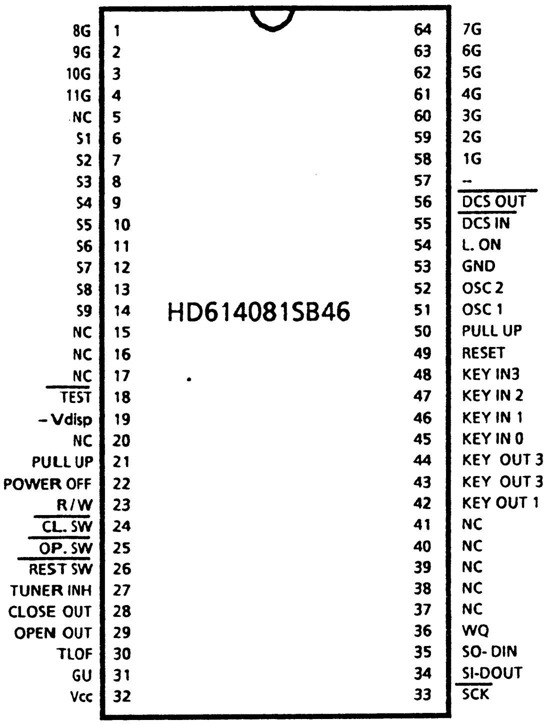
	KEY IN 0	KEY IN1	KEY IN2	KEY IN 3
KEY OUT 0	—	A ◀◀	A ▶▶	A ▶
KEY OUT 1	B ◀	B ◀◀	B ▶▶	B ▶
KEY OUT 2	A ■	B ■	B ●	B ❚❚
KEY OUT 3	A ▶▶ B	NR	🔁	CD D. REC
KEY OUT 4	TUNER	CD	TAPE	PHONO
KEY OUT 5	VIDEO / AUX	POWER		

3. Pin Function Description

Pin NO.	symbol	I/O	Function and Operations	Pin NO.	symbol	I/O	Function and Operations
1	TAPE	O	Tape indicator	33	CLOCK	O	Clock output
2	PHONO	O	Phono indicator	34	STB	O	Strobe signal output
3	TUNER	O	Tuner indicator	35	DATA	O	Data output
4	CD	O	CD indicator	36	S, MUTE	O	Source mute control
5	VIDEO / AUX	O	VIDEO / AUX indicator	37	NR REC	O	NR rec / play control
6	B CAP MOTOR	O	Capstan motor control	38	$\overline{\text{H,S DUB}}$	O	High speed dubbing control signal
7	$\overline{\text{B CAP SPEED}}$	O	Capstan speed control	39	$\overline{\text{KEY OUT 0}}$	O	Key matrix output 0
8	B PLUNGER 1	O	Plunger control 1	40	$\overline{\text{KEY OUT 1}}$	O	Key matrix output 1
9	B PLUNGER 2	O	Plunger control 2	41	$\overline{\text{KEY OUT 2}}$	O	Key matrix output 2
10	A CAP MOTOR	O	Capstan motor control	42	$\overline{\text{KEY OUT 3}}$	O	Key matrix output 3
11	$\overline{\text{A CAP SPEED}}$	O	Capstan speed control	43	$\overline{\text{KEY OUT 4}}$	O	Key matrix output 4
12	A PLUNGER 1	O	Plunger control 1	44	$\overline{\text{KEY OUT 5}}$	O	Key matrix output 5
13	A PLUNGER 2	O	Plunger control 2	45	$\overline{\text{KEY IN 0}}$	I	Key matrix input 0
14	$\overline{\text{A PLAY SW}}$	I	"L" with playing	46	$\overline{\text{KEY IN 1}}$	I	Key matrix input 1
15	$\overline{\text{A FF / REW SW}}$	I	"L" with doing FF/REW	47	$\overline{\text{KEY IN 2}}$	I	Key matrix input 2
16	$\overline{\text{B PLAY SW}}$	I	"L" with playing	48	$\overline{\text{KEY IN 3}}$	I	Key matrix input 3
17	$\overline{\text{B FF / REW SW}}$	I	"L" with doing FF / REW	49	RESET	I	Reset signal input
18	$\overline{\text{A PLUSE IN}}$	I	A deck reel pulse input	50	TEST		Pull up (+ 5V)
19	$\overline{\text{B PLUSE IN}}$	I	B deck reel pulse input	51	OSC 2		Clock oscilator input
20	$\overline{\text{POWER OFF}}$	O	AC RELAY OFF OUTPUT	52	OSC 1		Clock oscilator output
21	$\overline{\text{TUNER RESET}}$	O	TUNER RESET OUTPUT	53	GND		
22	$\overline{\text{INH}}$	I	INPUT SIGNAL FOR BACKUP	54	$\overline{\text{DCS OUT}}$	O	DCS signal output
23	$\overline{\text{RM IN}}$	I	REMOCON SIGNAL INPUT	55	$\overline{\text{DCS IN}}$	I	DCS signal input
24	$\overline{\text{B REV REC}}$	I	DETECT THE SAFETY LUGS	56	REC MUTE	O	Rec mute control
25	$\overline{\text{B FWD REC}}$	I	DETECT THE SAFETY LUGS	57	$\overline{\text{RM IND}}$	O	Remocon indicator
26	$\overline{\text{B PACK SW}}$	I	DETECT THAT THERE IS TAPE OR NOT	58	BIAS	O	BIAS Control
27	$\overline{\text{A PACK SW}}$	I	DETECT THAT THERE IS TAPE OR NOT	59	REV MODE	O	Reverse mode indicator
28	$\overline{\text{PLAY MUTE}}$	O	PLAYBACK MUTE OUTPUT	60	A FWD IND	O	A FWD indicator
29	A PLAY H	O	It is "H" at A play, "L" at B play	61	B REV IND	O	B REV indicator
30	VOL UP	O	Volume control	62	B FWD IND	O	B FWD indicator
31	VOL DOWN	O	Volume control	63	NR IND	O	NR indicator
32	+5V		Power supply	64	REC IND	O	Recording indicator

■ HD614081SB46(IC901) : CD SYSTEM CONTROLLER

1. Terminal Layout


HD614081SB46
8G 1
9G 2
10G 3
11G 4
NC 5
S1 6
S2 7
S3 8
S4 9
S5 10
S6 11
S7 12
S8 13
S9 14
NC 15
NC 16
NC 17
TEST 18
-Vdisp 19
NC 20
PULL UP 21
POWER OFF 22
R/W 23
CL. SW 24
OP. SW 25
REST SW 26
TUNER INH 27
CLOSE OUT 28
OPEN OUT 29
TLOF 30
GU 31
Vcc 32
64 7G
63 6G
62 5G
61 4G
60 3G
59 2G
58 1G
57 –
56 DCS OUT
55 DCS IN
54 L. ON
53 GND
52 OSC 2
51 OSC 1
50 PULL UP
49 RESET
48 KEY IN3
47 KEY IN 2
46 KEY IN 1
45 KEY IN 0
44 KEY OUT 3
43 KEY OUT 3
42 KEY OUT 1
41 NC
40 NC
39 NC
38 NC
37 NC
36 WQ
35 SO- DIN
34 SI-DOUT
33 SCK

2. KEY matrix

	KEY IN 0	KEY IN 1	KEY IN2	KEY IN3
KEY OUT 1	PLAY / PAUSE	▶▶❙	PROGRAM	——
KEY OUT 2	❙◀◀	◀◀	SIDE A / B	REPEAT ALL / 1
KEY OUT 3	STOP / CLEAR	▶▶	CANCEL	OPEN / CLOSE

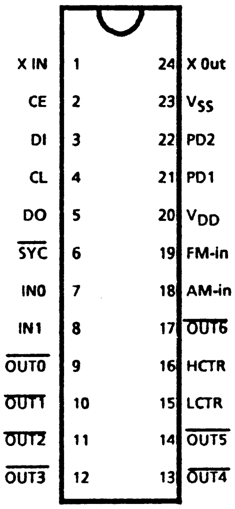
3. Pin Function Description

Pin NO.	symbol	I/O	Function and Operations	Pin NO.	symbol	I/O	Function and Operations
1	8G	O	FL grid control output	33	SCK	O	Clock output
2	9G	O	FL grid control output	34	SI	O	Serial data output
3	10G	O	FL grid control output	35	SO	I	Serial data input
4	11G	O	FL grid control output	36	WQ	I/O	Write request input
5	NC		Non connect	37	NC		Non connect
6	S1	O	FL segment control output	38	NC		Non connect
7	S2	O	FL segment control output	39	NC		Non connect
8	S3	O	FL segment control output	40	NC		Non connect
9	S4	O	FL segment control output	41	NC		Non connect
10	S5	O	FL segment control output	42	KEY OUT 1	O	Key matrix output
11	S6	O	FL segment control output	43	KEY OUT 2	O	Key matrix output
12	S7	O	FL segment control output	44	KEY OUT 3	O	Key matrix output
13	S8	O	FL segment control output	45	KEY IN 0	I	Key matrix input
14	S9	O	FL segment control output	46	KEY IN 1	I	Key matrix input
15	NC		Non connect	47	KEY IN 2	I	Key matrix input
16	NC		Non connect	48	KEY IN 3	I	Key matrix input
17	NC		Non connect	49	RESET	I	Reset signal input
18	TEST		Entering test mode with TEST(L)	50	TEST		PULL UP (+ 5V)
19	- Vdisp	I	Power supply for FL display	51	OSC 1		Clock oscillation input
20	NC		Non connect	52	OSC 2		Clock oscillation output
21		I	Pull up (+ 5V)	53	GND		
22	POWER OFF	I		54	L. ON	O	Turns on laser
23	R / W	O	Read / write signal output	55	DCS IN	I	DCS signal input
24	CL. SW	I	"L" with tray closed	56	DCS OUT	O	DCS signal output
25	OP. SW	I	"L" with tray open	57	—	I	To GND
26	REST SW	I	"L" with pickup rest position	58	1G	O	FL grid control output
27	TUNER INH	O		59	2G	O	FL grid control output
28	CLOSE	O	"CLOSE" signal output	60	3G	O	FL grid control output
29	OPEN	O	"OPEN" signal output	61	4G	O	FL grid control output
30	TLOF	O	Turns off tracking servo	62	5G	O	FL grid control output
31	GU	O	Increases tracking gain	63	6G	O	FL grid control output
32	Vcc		Power supply voltage (+ 5V)	64	7G	O	FL grid control output

IC102 : LC7218 (PLL Synthesizer)

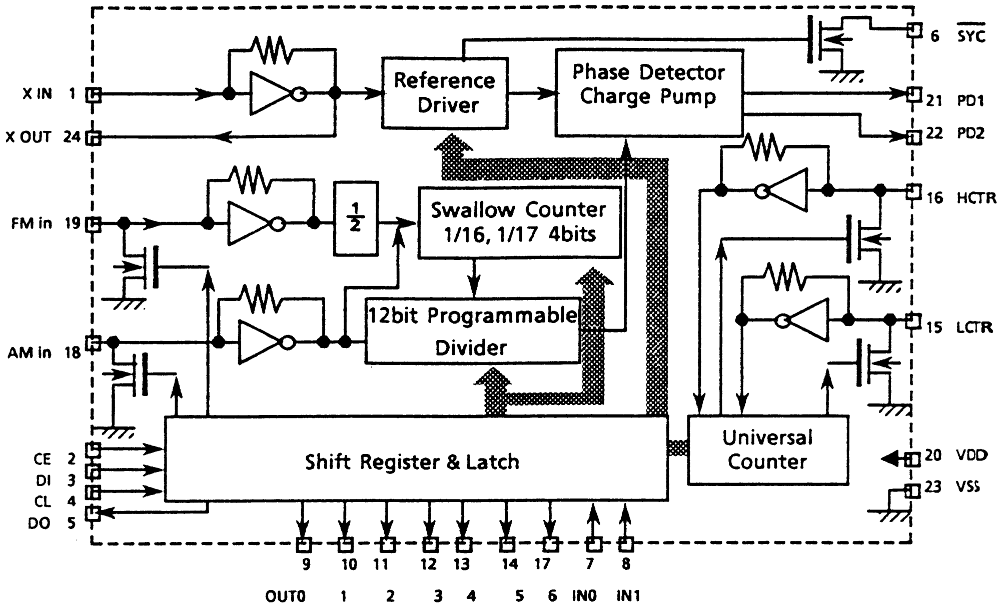
1. The main function descriptions
   (1) It makes the local oscillation frequency by the control data from IC401.
   (2) Decode the control signal and transmit the signal for receiving conditions.
   (3) For the best tuning, count the internal-frequency and transmit the data to IC401.

2. Terminal Layout



X IN 1
CE 2
DI 3
CL 4
DO 5
$\overline{\text{SYC}}$ 6
IN0 7
IN1 8
$\overline{\text{OUT0}}$ 9
$\overline{\text{OUT1}}$ 10
$\overline{\text{OUT2}}$ 11
$\overline{\text{OUT3}}$ 12
24 X Out
23 V_{SS}
22 PD2
21 PD1
20 V_{DD}
19 FM-in
18 AM-in
17 $\overline{\text{OUT6}}$
16 HCTR
15 LCTR
14 $\overline{\text{OUT5}}$
13 $\overline{\text{OUT4}}$

3. Block Diagram



X IN 1
X OUT 24
FM in 19
AM in 18
CE 2
DI 3
CL 4
DO 5
Reference Driver
Phase Detector Charge Pump
$\frac{1}{2}$
Swallow Counter 1/16, 1/17 4bits
12bit Programmable Divider
Shift Register & Latch
Universal Counter
6 $\overline{\text{SYC}}$
21 PD1
22 PD2
16 HCTR
15 LCTR
20 VDD
23 VSS
9 10 11 12 13 14 17 7 8
OUT0 1 2 3 4 5 6 IN0 IN1

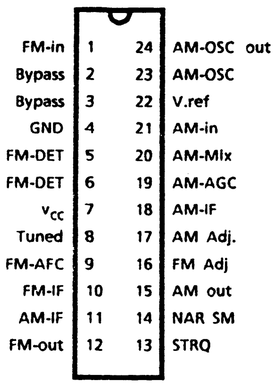
4. Pin Function Description

Pin No.	Symbol	Name	I/O	Functions and Operations
1,24	X in , X out	X in , X out	I/O	Crystal oscillator (7.2MHz).
2	CE	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.
3	DI	DI	I	Receive the control data from the controller (IC401).
4	CL	CL	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	DO	DO	O	Transmit the data from LC7218 to the controller which is synchronized with CL.
6	$\overline{\text{SYC}}$	$\overline{\text{SYC}}$	–	Not used.
7	IN0	Tuned in	I	Receive the tuned signal from IC104 (LA1266A).
8	IN1	Stop in	I	Not used.
9	OUT 0	POWER	O	Not used.
10	OUT 1	QSC	O	ON mode with " H " and OFF mode with " L ".
11	OUT2	MONO	O	It is "H" on FM-monaural, "L" on FM-Stereo.
12	OUT3	FM	O	It is "H" on FM mode.
13	OUT4	MW	O	It is "H" on AM mode.
14	OUT5		–	Not used.
15	LCTR	AM-IF	I	Universal counter input for AM-IF from IC104 (LA1266A).
16	HCTR	FM-IF	I	Universal counter input for FM-IF from IC104(LA1266A).
17	OUT6	IF REQ	O	Output the "IF-signal request" to IC104 when the pin-7 (tuned in) go to "H".
18	AM in	AM in	I	Input the local oscillator signal of AM.
19	FM in	FM in	I	Input the local oscillator signal of FM.
20	V_{DD}	V_{DD}	–	This is a terminal of power supply.
21	PD1	PD1	O	PLL charge pump output: When the local oscillator signal frequency is higher than the reference frequency high level signals will output. When it is lower than the reference frequency, low level signals will output. When it is same as reference frequency signals, it will be floating.
22	PD2	PD2	O	Not used.
23	Vss	Vss	–	Power supply.

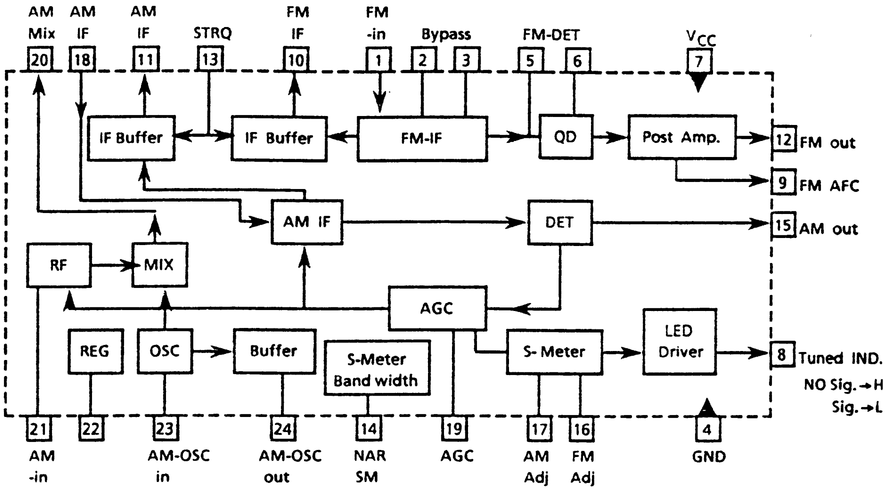
■ LA1266A (IC104) : FM AM IF AMP & detector

1. The main function descriptions
   (1) Amplify and detect of FM intermodulation frequencies.
   (2) It has local oscillator and mixer for AM, and amplify the AM-IF signal.

2. Top View


FM-in 1
Bypass 2
Bypass 3
GND 4
FM-DET 5
FM-DET 6
Vcc 7
Tuned 8
FM-AFC 9
FM-IF 10
AM-IF 11
FM-out 12
24 AM-OSC out
23 AM-OSC
22 V.ref
21 AM-in
20 AM-MIx
19 AM-AGC
18 AM-IF
17 AM Adj.
16 FM Adj
15 AM out
14 NAR SM
13 STRQ

3. Block Diagram


AM Mix 20
AM IF 18
AM IF 11
STRQ 13
FM IF 10
FM -in 1
Bypass 2 3
FM-DET 5 6
VCC 7
IF Buffer
IF Buffer
FM-IF
QD
Post Amp.
12 FM out
9 FM AFC
AM IF
DET
15 AM out
RF
MIX
AGC
REG
OSC
Buffer
S-Meter Band width
S- Meter
LED Driver
8 Tuned IND.
NO Sig.→H
Sig.→L
21 AM -in
22
23 AM-OSC in
24 AM-OSC out
14 NAR SM
19 AGC
17 AM Adj
16 FM Adj
4 GND

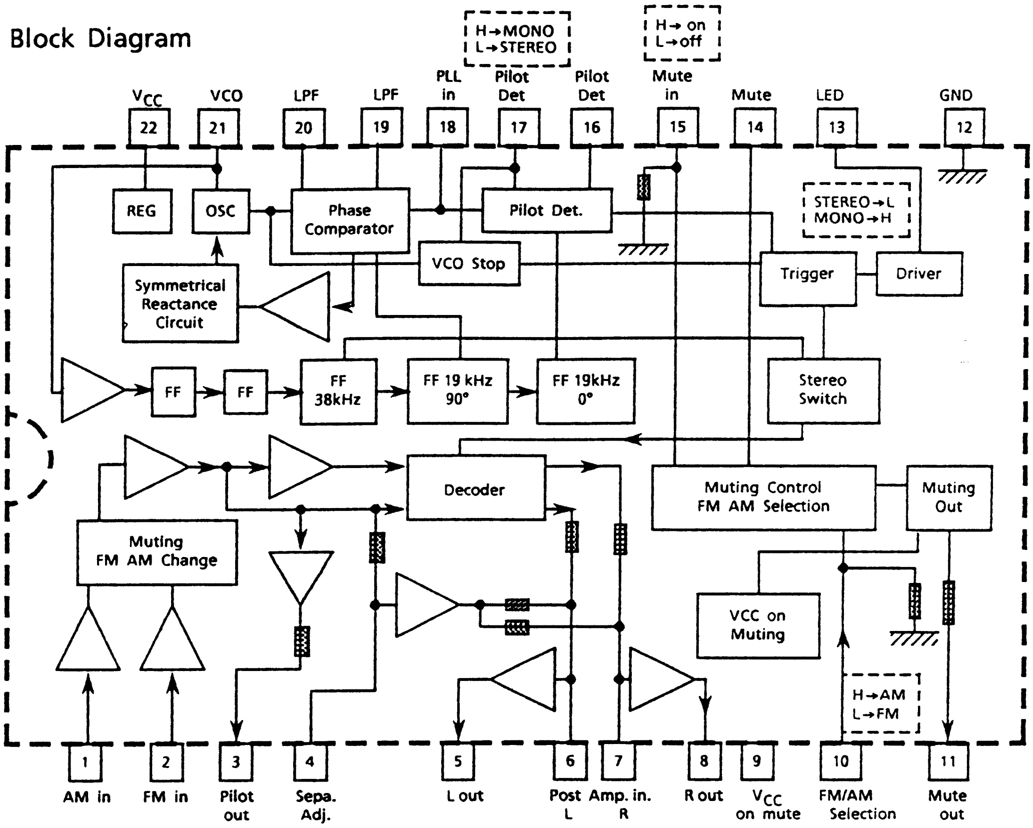
4. Pin Function Description

Pin No.	Symbol	I/O	Functions and Operations
1	FM in	I	This is an input terminal of FM IF Signal.
2,3	Bypass		Bypass of FM IF Amp.
4	GND		This is the device ground terminal.
5,6	FM DET		FM detect transformer.
7	V_{CC}		This is the power supply terminal.
8	Tuned		Not used.
9	FM AFC	O	This is an output terminal of voltage for FM - AFC.
10	FM IF out	O	When the signal of IF REQ of IC102(LC7218) applied to pin17, the signal of FM IF does output.
11	AM IF out	O	When the signal of IF REQ of IC102(LC7218) applied to pin17, the signal of AM IF does output.
12	FM out	O	FM detection output.
13	STRQ	I	The IF-signals come out from pin10 (FM-IF) or pin11 (AM-IF) while this terminal going to "High".
14	NAR SM		Control the Band-width of signal meter.
15	AM out	O	AM detection output.
16	FM Adj		For adjust the stop level (or mute level) of FM.
17	AM Adj		For adjust the stop level (or mute level) of AM.
18	AM-IF	I	Input of AM IF Signal.
19	AM-AGC	I	This is an AGC voltage Input terminal for AM.
20	AM-MIX	O	This is an output terminal for AM mixer.
21	AM-IN	I	This is an input terminal for AM RF Signal.
22	V.REF		
23	AM-OSC		This is a terminal of AM Local oscillation circuit.
24	AM-OSC out	O	AM Local Oscillation Signal output.

■ IC105 : LA3401 (FM MPX Detector)

1. The main function descriptions
   (1) Detect the FM Multiplex Signal (Stereo signal).
   (2) When the FM Signal is Stereo Modulation, it will output the signal for indicator.
   (3) AM / FM Audio Amplifier.

2. Top View & Block Diagram


H→MONO
L→STEREO
H→ on
L→off
VCC
VCO
LPF
LPF
PLL in
Pilot Det
Pilot Det
Mute in
Mute
LED
GND
22
21
20
19
18
17
16
15
14
13
12
REG
OSC
Phase Comparator
Pilot Det.
VCO Stop
STEREO→L
MONO→H
Trigger
Driver
Symmetrical Reactance Circuit
FF
FF
FF 38kHz
FF 19 kHz 90°
FF 19kHz 0°
Stereo Switch
Decoder
Muting Control FM AM Selection
Muting Out
Muting FM AM Change
VCC on Muting
H→AM
L→FM
1
2
3
4
5
6
7
8
9
10
11
AM in
FM in
Pilot out
Sepa. Adj.
L out
Post Amp. in. L R
R out
VCC on mute
FM/AM Selection
Mute out

3. Pin Function Description

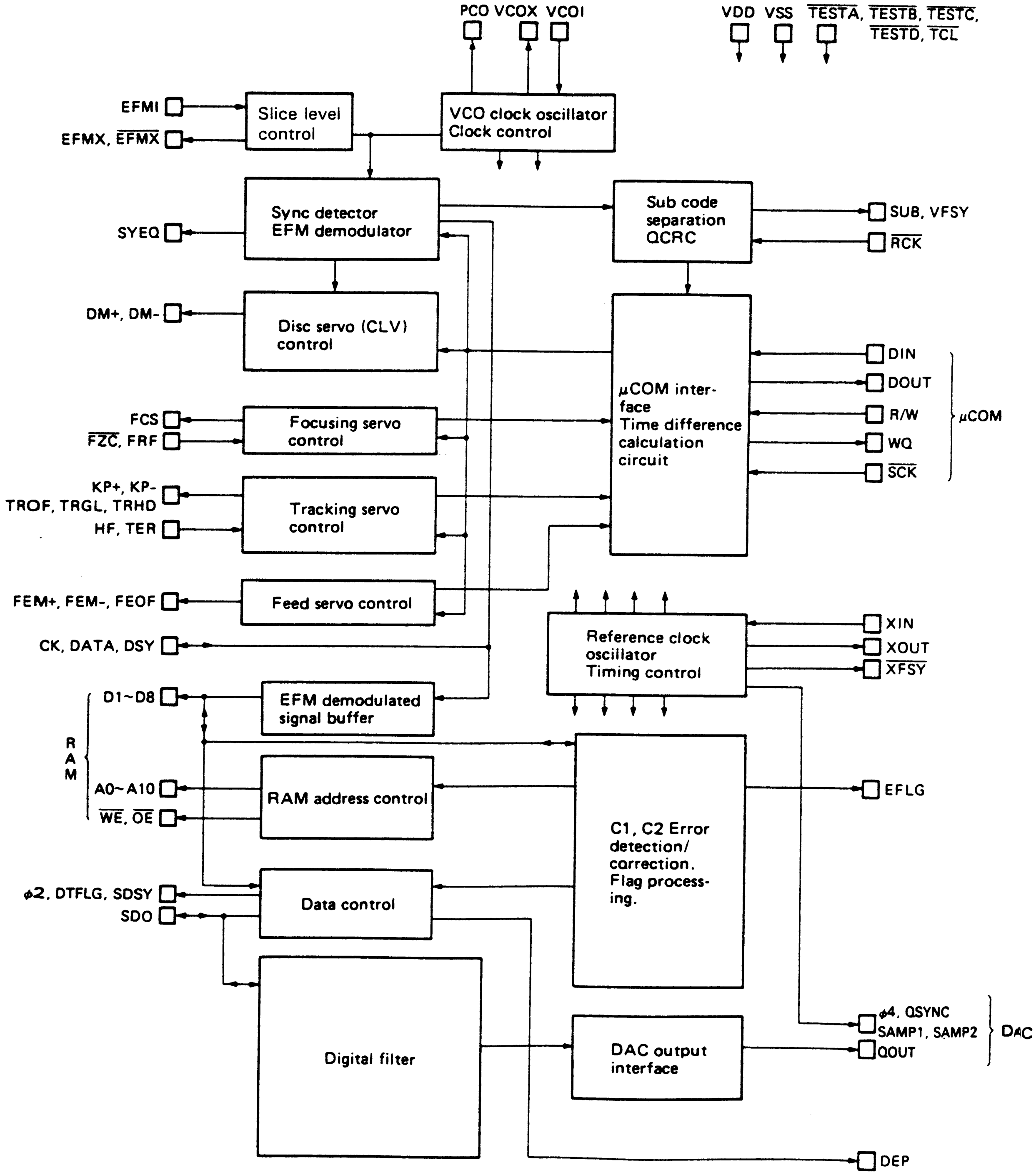
Pin No.	Symbol	H/L	I/O	Functions and Operations
1	AM in			This is an input terminal for AM detection signal.
2	FM in			This is an input terminal for FM detection signal.
3	Pilot out			Output of MPX pilot signal (Connected to Pin18).
4	Sepa. Adj.			Separation adjustment.
5	L. out		O	Left channel signal output.
6	RL		O	Reversal output of Pin5.
7	RR		O	Reversal output of Pin8.
8	R out		O	Right channel signal output
9	V_{CC} on mute			The muting time after power on is controlled by the connected capacitor.
10	FM / AM		I	Switch-over the FM / AM input. "H" : AM, "L" : FM
11	Mute out		O	Muting signal output.
12	GND			Ground terminal.
13	Stereo		O	Stereo indicator output. Stereo : "L", Mono : "H"
14	Mute			The muting time at switch-over the FM / AM is changed by the connected capacitor.
15	Mute in		I	Muting signal input. "H" : Mute on, "L" : Mute off.
16	LPF			Low pass filter of pilot detector.
17	LPF			While this terminal going "H", the VCO stop.
18	Pilot in			PLL input.
19	LPF			Loop filter of PLL.
20	LPF			Loop filter of PLL.
21	VCO			Voltage controlled oscillator terminal.
22	V_{CC}			Power supply.

■ IC841: YM3805-H

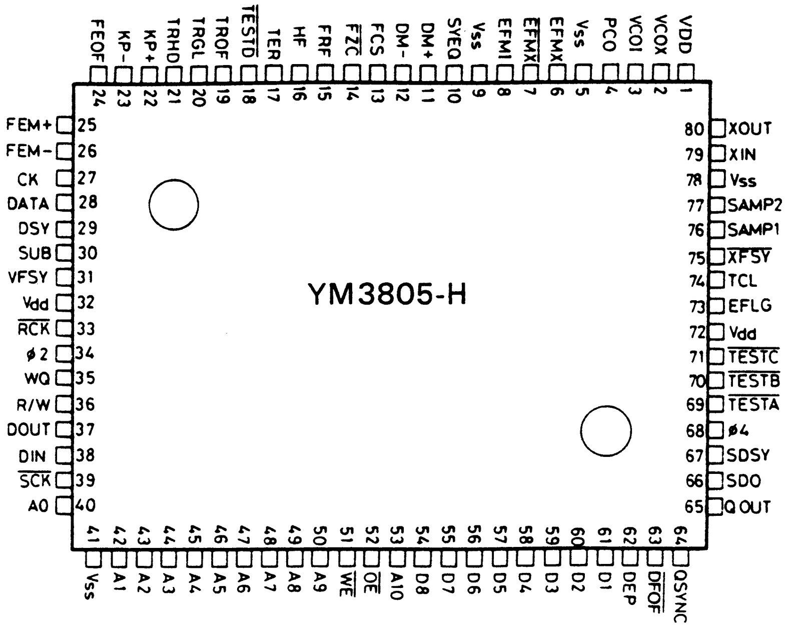
(1) Outline:

YM3805 is a C-MOS LSI for signal processing (SGP) and servo control (SVC) in a CD player. It is used for the demodulation of the EFM signal from the photo pickup, detection/correction of the error signal, signal processing in digital filtering, etc. and for various servo controls (focusing, disc, tracking and feed servos).

(2) Internal block diagram


PCO VCOX VCOI
VDD VSS TESTA, TESTB, TESTC, TESTD, TCL
EFMI
EFMX, EFMX
Slice level control
VCO clock oscillator Clock control
SYEQ
Sync detector EFM demodulator
Sub code separation QCRC
SUB, VFSY
RCK
DM+, DM-
Disc servo (CLV) control
μCOM interface Time difference calculation circuit
DIN
DOUT
R/W
WQ
SCK
μCOM
FCS
FZC, FRF
Focusing servo control
KP+, KP- TROF, TRGL, TRHD
HF, TER
Tracking servo control
FEM+, FEM-, FEOF
Feed servo control
CK, DATA, DSY
Reference clock oscillator Timing control
XIN
XOUT
XFSY
D1~D8
EFM demodulated signal buffer
RAM
A0~A10
WE, OE
RAM address control
C1, C2 Error detection/ correction. Flag processing.
EFLG
φ2, DTFLG, SDSY
SDO
Data control
Digital filter
DAC output interface
φ4, QSYNC SAMP1, SAMP2
QOUT
DAC
DEP

(3) Terminal Layout


YM3805-H
1 VDD
2 VCOX
3 VCOI
4 PCO
5 Vss
6 EFMX
7 EFMX
8 EFMI
9 Vss
10 SYEQ
11 DM+
12 DM−
13 FCS
14 FZC
15 FRF
16 HF
17 TER
18 TESTD
19 TROF
20 TRGL
21 TRHD
22 KP+
23 KP−
24 FEOF
25 FEM+
26 FEM−
27 CK
28 DATA
29 DSY
30 SUB
31 VFSY
32 Vdd
33 RCK
34 φ2
35 WQ
36 R/W
37 DOUT
38 DIN
39 SCK
40 A0
41 Vss
42 A1
43 A2
44 A3
45 A4
46 A5
47 A6
48 A7
49 A8
50 A9
51 WE
52 OE
53 A10
54 D8
55 D7
56 D6
57 D5
58 D4
59 D3
60 D2
61 D1
62 DEP
63 DFOF
64 QSYNC
65 Q OUT
66 SDO
67 SDSY
68 φ4
69 TESTA
70 TESTB
71 TESTC
72 Vdd
73 EFLG
74 TCL
75 XFSY
76 SAMP1
77 SAMP2
78 Vss
79 XIN
80 XOUT

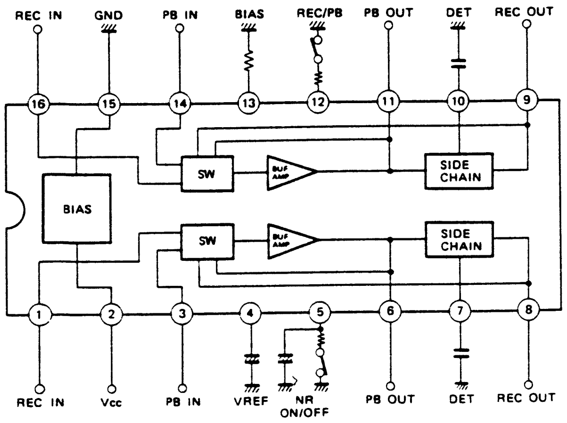
(4) Pin Functions

Pin No.	Pin Name	I/O	Function
1 32 72	VDD	−	These are +5 V power supply pins.
2 3	VCOX VCOI	O I	A clock pulse (approx. 8.6436 MHz) is generated when an LC resonance circuit is connected to these pins.
4	PCO	O	This pin outputs the phase difference between the clock and EFM pattern when polarity changes. Clock regeneration is enabled by setting the polarity of the variable-capacitance diode so that the frequency rises when it is positive (+).
5 9 41 78	Vss	−	These are ground pins.
6 7	EFMX $\overline{\text{EFMX}}$		These pins are connected to the EFM signal slice level control circuit. Amplitude-limited signals with opposite phases are generated.
8	EFMI	I	The EFM signal (1-2 Vp-p) is input to this pin.
10	SYEQ	O	This is the output pin for checking. It goes high when the sync signal detected in the EFM pattern matches the sync signal from the internal counter.
11 12	DM+ DM−	O O	These pins output PWM signals which are supplied to the spindle motor drive circuit. The spindle motor accelerates when the DM+ output is high, and decelerates when the DM− output is high. The two pins never go high at the same time.
13 14 15	FCS $\overline{\text{FZC}}$ FRF	O I+ I	These pins are used to control focus servo. The FCS signal activates the focusing operation. When the $\overline{\text{FZC}}$ signal, generated when the correct focus is obtained, is detected, the focusing operation is stopped, and the FCO flag drops internally in response to the FRF signal which is generated when reflected light is detected.

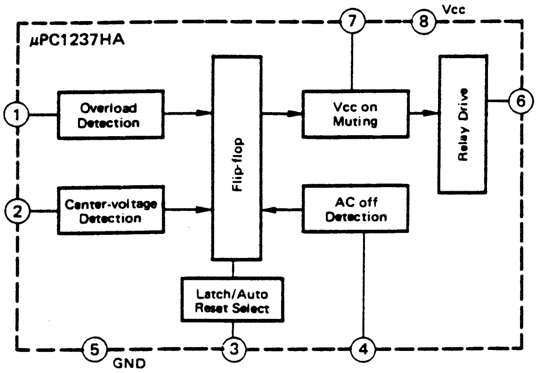
Pin No.	Pin Name	I/O	Function
16	HF	I	When the pickup moves across the tracks during searching operation, the amplitude variation of the generated HF signal is sampled at the zero-cross point of the tracking error signal TER, and the TROF signal is out put. The level change of this signal is used to turn the servo ON and OFF so that the target track can be detected easily. To activate track jump (kick) operation, the KP+ and KP− signals are output and during this period the TRHD signal is output to generate the tracking error signal. The TRGL signal is used to increase the tracking gain after track jump (kick) is completed.
17	TER	I	
19	TROF	O	
20	TRGL	O	
21	TRHD	O	
22	KP+	O	
23	KP−	O	
24	FEOF	O	The EFM+ or EFM− signal is output as a high-speed feed signal. During this period, the EFOF signal is output to interrupt the feed servo. All these pins go low in the normal play mode.
25	FEM+	O	
26	FEM−	O	
27	CK	I/O	This pin is the check pin. The CK signal is the clock frequency of approx. 4.3218 MHz, generated by halving the frequency of the VCO.
35	WQ	O	This pin is connected to the microcomputer. It outputs request signals when data is to be transferred from SPC to the microcomputer.
36	R/W	I	This pin is connected to the microcomputer. It is the input pin for switching the data transfer mode. Data is transferred from SPC to the microcomputer when it is low, and from the microcomuter to SPC when it is high.
37	DOUT	O	This pin is the data output pin connected to the microcomputer. Data is transferred from SPC to the microcomputer synchronized with the SCK clock input when the R/W signal is at high level.
38	DIN	I	This pin is the data output pin connected to the microcomputer. Data is transferred from the microcomputer to SPC synchronized with the $\overline{\text{SCK}}$ clock input when the R/W signal is at high level.
39	$\overline{\text{SCK}}$	I	This pin is connected to the microcomputer. It is the clock input pin required for data transfer.
40	A0	O	These are the address output pins connected to the RAM.
42	A1		
~	~		
50	A9		
53	A10		
51	$\overline{\text{WE}}$	O	This pin is connected to the RAM. When it goes low, the RAM enters the write mode.
52	$\overline{\text{OE}}$	O	This pin is connected to the RAM. When it goes low, the RAM enters the read mode.
54 ~ 61	D8 ~ D1	I/O	These are the data input/output pins connected to the RAM. They are set to the output mode when the $\overline{\text{WE}}$ signal is at low level, and set to the input mode when it is at high level.
62	DEP	O	This outputs the frequency characteristics control signal. Deemphasis is required when it is at high level.
64	QSYNC	O	QOUT, the serial output signal for D/A converter, is a 16-bit serial signal which is synchronized with the rising edge of the 4.3218 MHz clock (ϕ4), and is output in 2's complement format. SAMP1 and SAMP2 are deglitcher signals for the L and R channels respectively.
65	QOUT	O	
68	ϕ4	O	
76	SAMP1	O	
77	SAMP2	O	
18	$\overline{\text{TESTD}}$	O	These are not used in this unit.
28	DATA	I/O	
29	DSY	I/O	
30	SUB	O	
31	VFSY	O	
33	RCK	I+	
34	ϕ2	O	
63	$\overline{\text{DFOF}}$	O	
66	SDO	I/O	
67	$\overline{\text{SDSY}}$	O	
69	$\overline{\text{TESTA}}$	I+	
70	$\overline{\text{TESTB}}$	I+	
71	$\overline{\text{TESTC}}$	O	
73	EFLC	I+	
74	TCL	I/O	
75	$\overline{\text{XFSY}}$	I+	
79	X IN	I	The clock frequency is generated when an 8.6436 MHz crystal oscillator is connected between the pins and 10 pF connected between GND and each pin.
80	XOUT	O	

Explanation of Other ICs

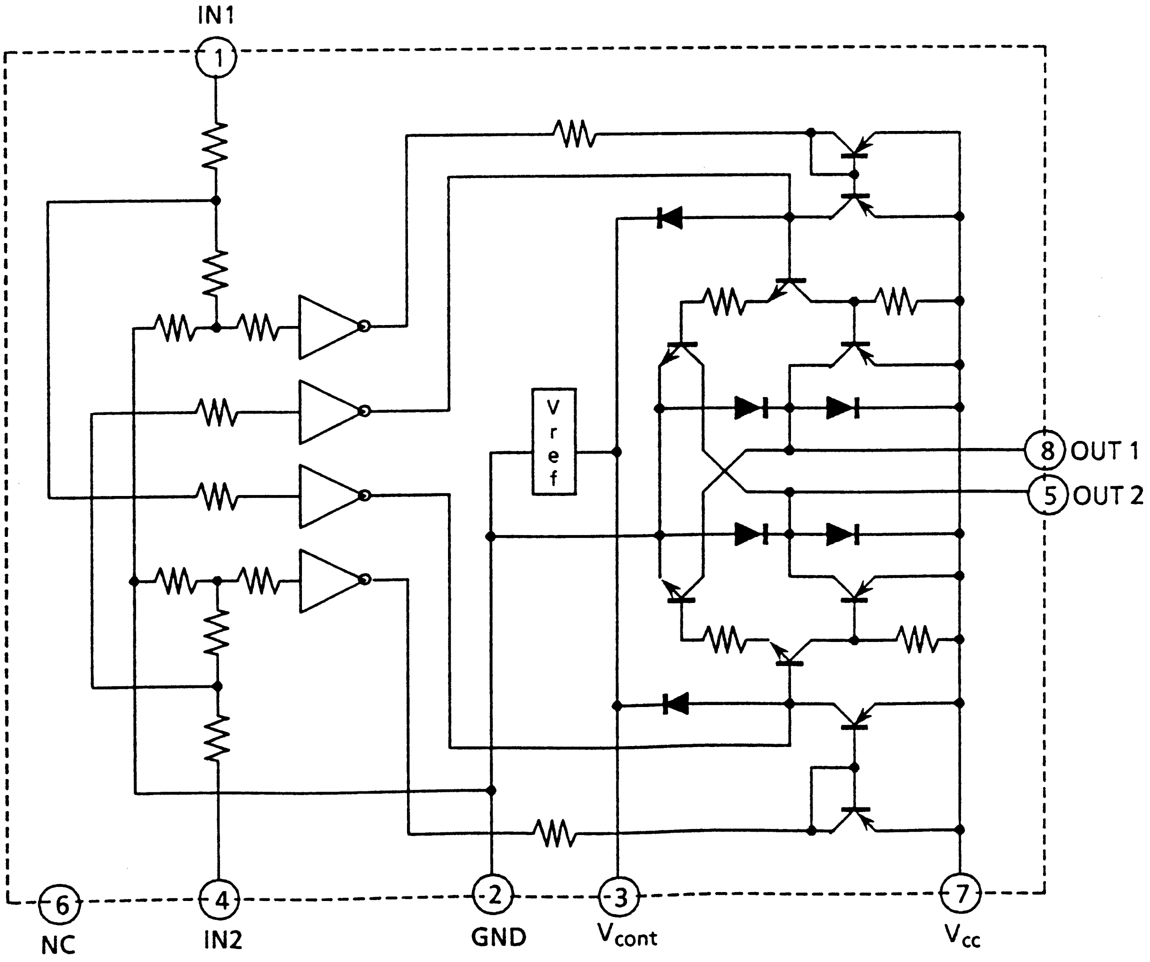
IC381: HA12136A (Noise Reduction amplifier)


REC IN
GND
PB IN
BIAS
REC/PB
PB OUT
DET
REC OUT
16
15
14
13
12
11
10
9
SW
BUF AMP
SIDE CHAIN
BIAS
SW
BUF AMP
SIDE CHAIN
1
2
3
4
5
6
7
8
REC IN
Vcc
PB IN
VREF
NR ON/OFF
PB OUT
DET
REC OUT

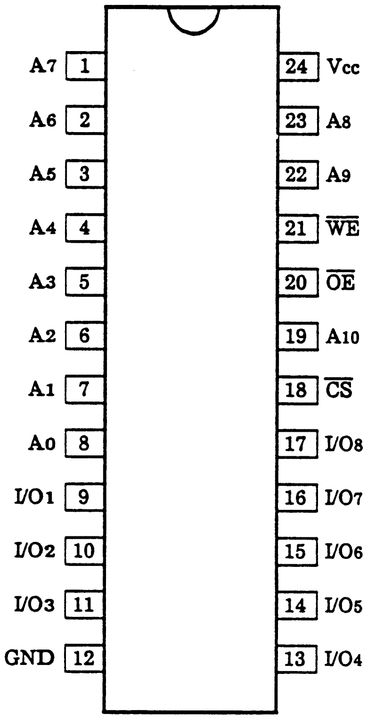
IC002: μPC1237HA (Protector)

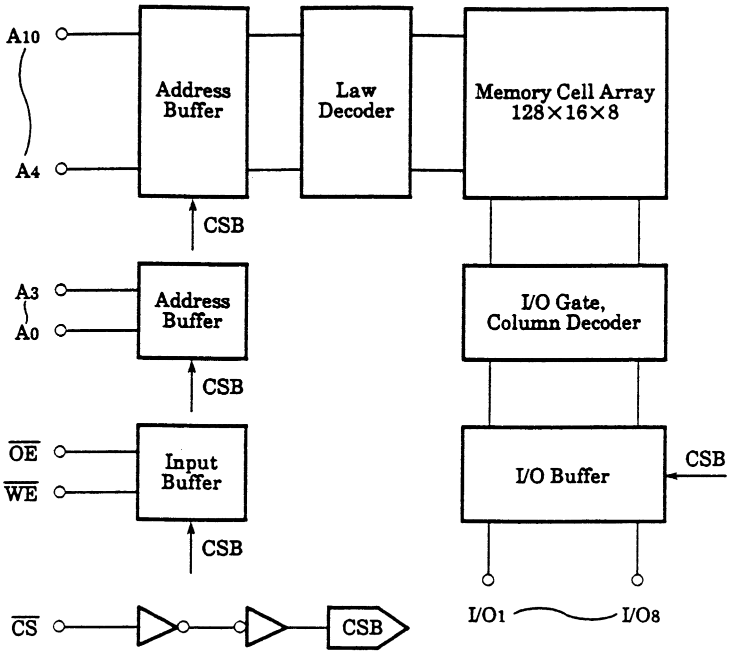

7
8
Vcc
μPC1237HA
1
Overload Detection
Flip-flop
Vcc on Muting
Relay Drive
6
2
Center-voltage Detection
AC off Detection
Latch/Auto Reset Select
5
GND
3
4

■ LB1639-CV (IC503): Motor Driver


IN1
1
V r e f
8
OUT 1
5
OUT 2
6
NC
4
IN2
2
GND
3
V_{cont}
7
V_{cc}

■ LC3517BS-15 (IC842): Static RAM

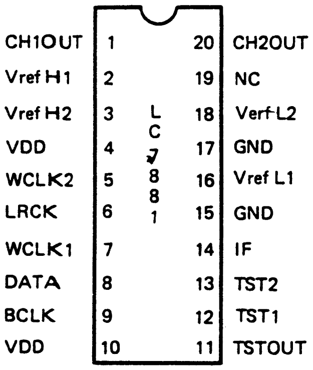

A7 1
A6 2
A5 3
A4 4
A3 5
A2 6
A1 7
A0 8
I/O1 9
I/O2 10
I/O3 11
GND 12
24 Vcc
23 A8
22 A9
21 WE
20 OE
19 A10
18 CS
17 I/O8
16 I/O7
15 I/O6
14 I/O5
13 I/O4

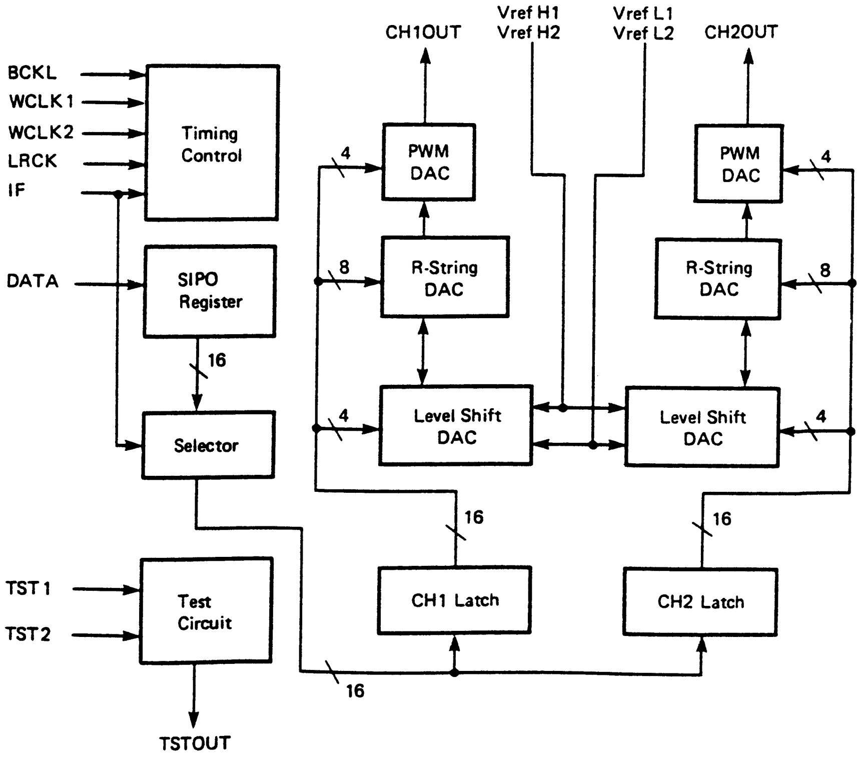

A10
A4
Address Buffer
Law Decoder
Memory Cell Array 128×16×8
CSB
A3
A0
Address Buffer
I/O Gate, Column Decoder
CSB
OE
WE
Input Buffer
I/O Buffer
CSB
CSB
CS
CSB
I/O1
I/O8

■ LC7881-C (IC873): D/A converter

(1) Terminal Layout

(2) Block Diagram

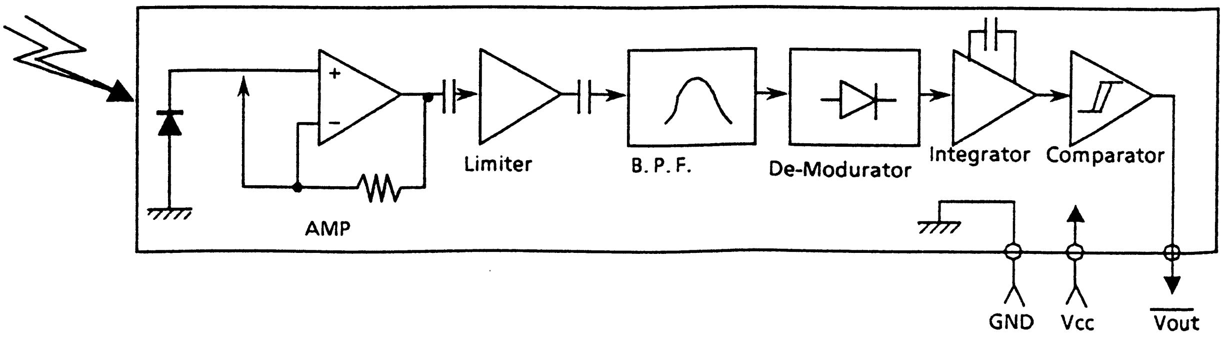

CH1OUT 1
Vref H1 2
Vref H2 3
VDD 4
WCLK2 5
LRCK 6
WCLK1 7
DATA 8
BCLK 9
VDD 10
LC7881
20 CH2OUT
19 NC
18 Verf L2
17 GND
16 Vref L1
15 GND
14 IF
13 TST2
12 TST1
11 TSTOUT


BCKL
WCLK1
WCLK2
LRCK
IF
Timing Control
DATA
SIPO Register
16
Selector
TST1
TST2
Test Circuit
TSTOUT
CH1OUT
Vref H1
Vref H2
Vref L1
Vref L2
CH2OUT
PWM DAC
4
R-String DAC
8
Level Shift DAC
4
PWM DAC
4
R-String DAC
8
Level Shift DAC
4
16
CH1 Latch
16
CH2 Latch
16

(3) Pin Functions

Pin No.	Pin Name	Function and Operation
1	CH1 OUT	CH1 Output pin
2	Vref H1	Reference voltage "H" input pin 1
3	Vref H2	Reference voltage "H" input pin 2
4	V_{DD}	Power voltage pin, +5 V
5	WCLK2	Word clock 2 input pin When IF pin is at high level, WCLK2 pin should be set at low level. When IF pin is at low level, this generates the internal signal used to latch the CH1 data of the digital audio signal, using the falling edge of WCLK2.
6	LRCK	LR clock input pin. This shows the CH1 and CH2 of the input digital audio data. When LRCK is at high level, it corresponds to CH1 data. When LRCK is at low level, it corresponds to CH2 data.
7	WCLK1	Word clock input pin. When IF pin is at high level, this pin generates the internal signal used to latch both the CH1 and CH2 data, using the falling edge of WCLK1. When IF pin is at low level, it generates the internal signal used to latch the CH2 data.
8	DATA	Digital audio data input pin. When IF pin is at high level, the data signal is input by each bit serially from the MSB. When IF pin is at low level, the data signal is input by each bit serially from the LSB.
9	BCLK	Bit clock pin. This clock signal is used when reading the digital audio data by each bit serially, and also used for PWM D/A converter.
10	V_{DD}	Power voltage pin, +5 V
11	TST OUT	Test signal output pin. Normally leave this pin open.
12	TST1	Test signal output pin. Normally connect to GND terminal.
13	TST2	
14	IF	Interface select pin. When IF pin is at high level, the digital audio data is input from the MSB first. When IF pin is at low level, the digital audio data is input from the LSB first.
15	GND	GND pin.
16	Vref L1	Reference voltage "L" input pin 1.
17	GND	GND pin.
18	Vref L2	Reference voltage "L" input pin 2.
19	NC	No connection.
20	CH2 OUT	CH2 output pin.

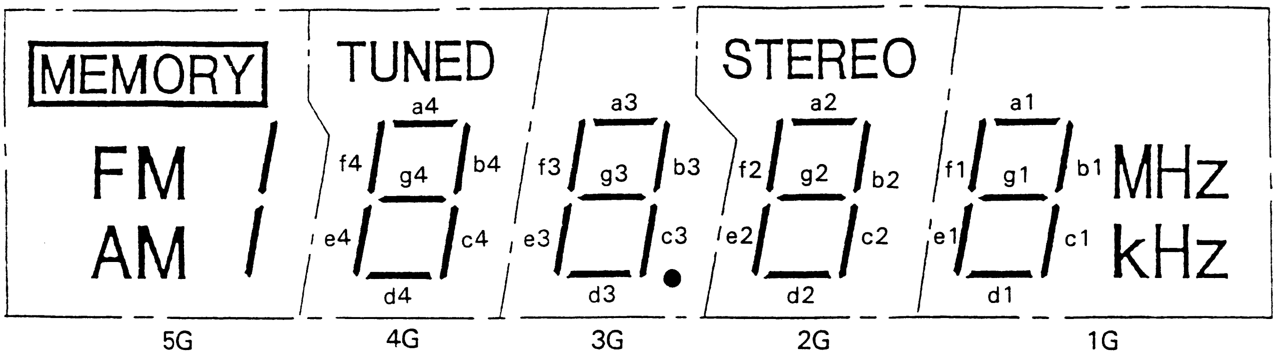
■ GP1U501X (IC502) : Remocon Module IC



Internal Connections of the FL Display Tube

■ ELU0001-077 (FL401)

(1) Grid Layout


MEMORY
FM
AM
TUNED
a4
f4
g4
b4
e4
c4
d4
a3
f3
g3
b3
e3
c3
d3
STEREO
a2
f2
g2
b2
e2
c2
d2
a1
f1
g1
b1
e1
c1
d1
MHz
kHz
5G
4G
3G
2G
1G

(2) Pin Connections

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Electrode	F	F	NP	NC	5G	S4	5G	S3	4G	S2	S1	3G	S5	NC	2G	NC	S6	1G

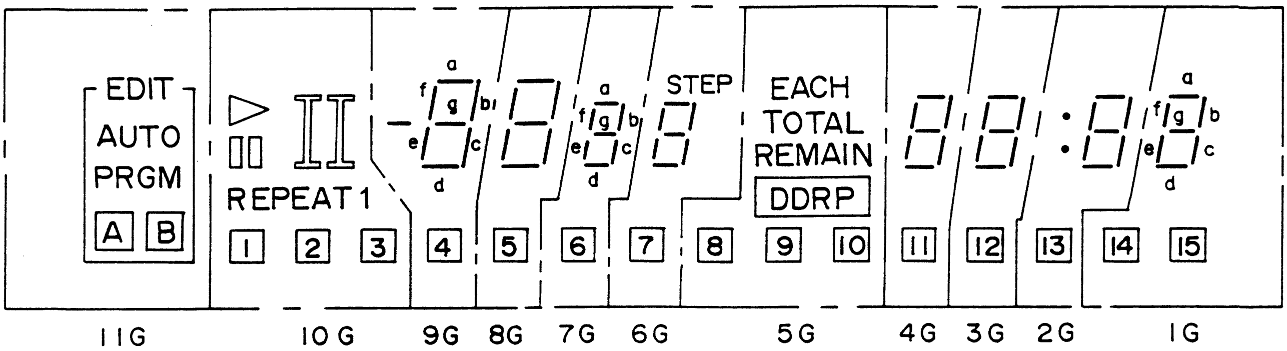
Pin No.	19	20	21	22	23	24
Electrode	S7	1G	S8	NP	F	F

(3) Anode Connection Table

	5G	4G	3G	2G	1G
S1		TUNED	●	STEREO	
S2		a4	a3	a2	
S3		b4	b3	b2	MHz
S4	MEMORY	c4	c3	c2	kHz
S5		d4	d3	d2	g1
S6	FM	e4	e3	e2	f1, c1
S7	AM	f4	f3	f2	b1, e1
S8	/ /	g4	g3	g2	a1, d1

■ ELU0001-091 (FL901)

(1) Grid Layout


EDIT
AUTO
PRGM
A
B
REPEAT 1
STEP
EACH
TOTAL
REMAIN
DDRP
a
b
c
d
e
f
g
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G

(2) Pin Connections

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Electrode	F	F	NP	S1	11G	S2	S3	10G	S4	S5	10G	S6	9G	S7

Pin No.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Electrode	8G	S8	7G	S9	6G	NC	5G	NC	NC	5G	NC	4G	NC	3G

Pin No.	29	30	31	32	33	34	35	36
Electrode	2G	NC	1G	1G	NC	NP	F	F

(3) Anode Connection Table

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	EDIT	▮▮	a	a	a	a	EACH	a	a	a	a
S2	AUTO	I (Left)	b	b	b	b	TOTAL	b	b	b	b
S3	PRGM	I (Righ)	f	f	f	f	REMAIN	f	f	f	f
S4	B	REPEAT	g	g	g	g	DDRP	g	g	g	g
S5	A	1	c	c	c	c	10	c	c	c	c
S6		1	e	e	e	e	9	e	e	e	e
S7		2	d	d	d	d	8	d	d	d	d
S8		3	4	5	6	7		11	12	13	14
S9		▶	—			STEP				:	15

Disassembly Procedures

(1) Removing the top cover

1. Remove the screws on both sides of the cassette receiver.
2. Remove the six screws on the back, then lift up the back of the top cover.

(2) Removing the front panel

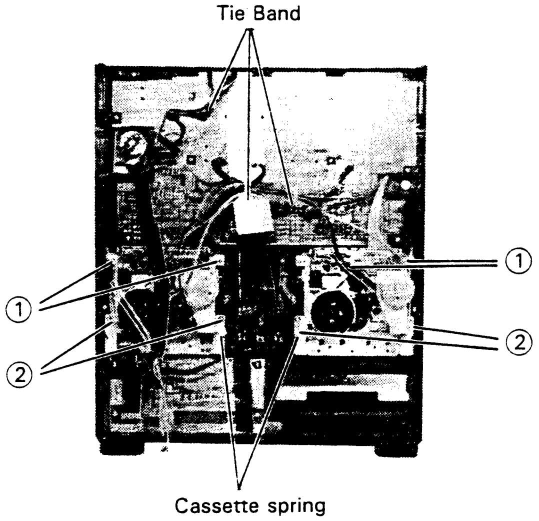
1. Remove the tray assembly. (See the (8))
2. Remove two screws fastening the side of the front panel assembly, and three screws fastening the bottom.
4. Disconnect the connectors.
   Main P.C.Board(J021,J261,J251,J041,P201, P202,JB301)
   CD P.C. Board (J911, J913)
   TUNER P.C. Board (J101),(J105 only U)
5. Remove the front panel.

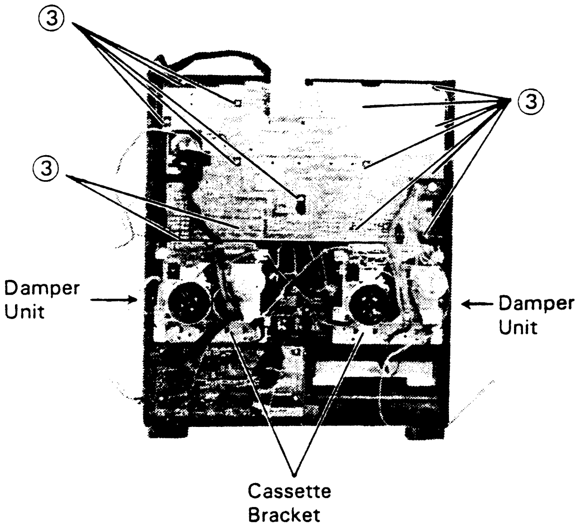
(3) Removing the cassette mechanism

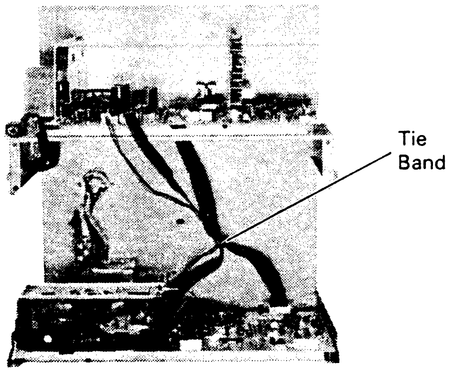
1. Remove the screws ① and the screws ②.
   Screws ① are the double line screws for plastic screws.
   Screws ② are the tapping screws for chassis.
2. Open the cassette door and remove the mechanism

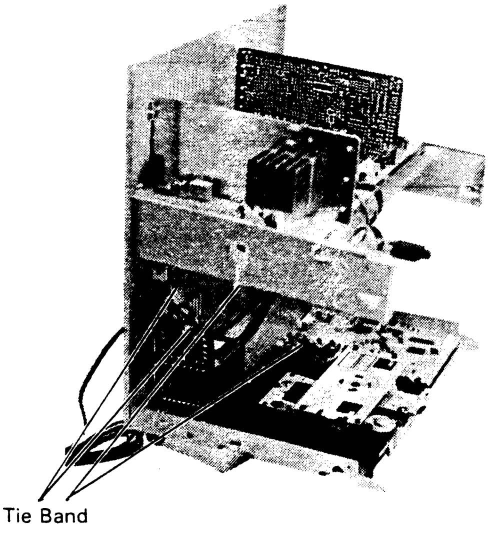
(4) Removing the cassette door

1. Remove the cassette mechanism.
2. Disconnect the cassette spring from the cassette bracket.
3. Remove the screws holding the damper units and then remove the damper units.
4. Remove the screws holding the cassette brackets and then remove the cassette brackets.
5. Remove the cassette doors.







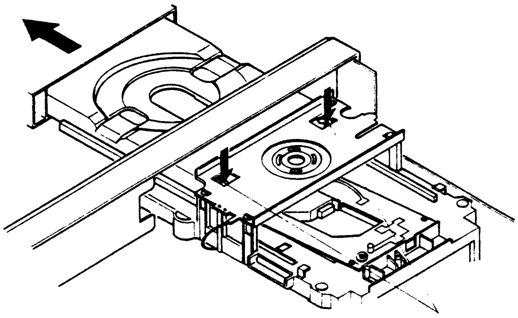


(5) Removing the cassette switch P.C. Board

1. Remove the six screws holding the cassette switch P.C. Board.
2. Remove the cassette switch Board.

(6) Removing the Master volume

1. Pull off the master volume knob.
2. Remove the nut fixing the master volume.

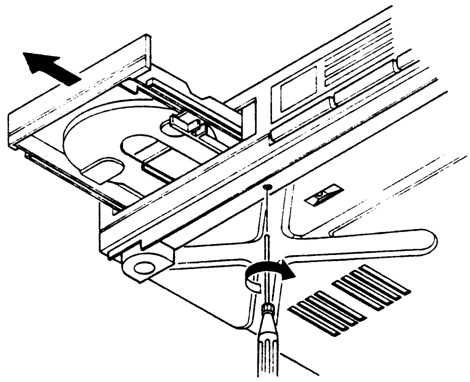


(7) Removing the Front P.C. Board

1. Remove the balance volume knob and the master volume.
2. Remove the flat wire FW451.
3. Remove the fourteen screws ③.
4. Remove the Front P.C. Board.

(8) Removing the tray assembly

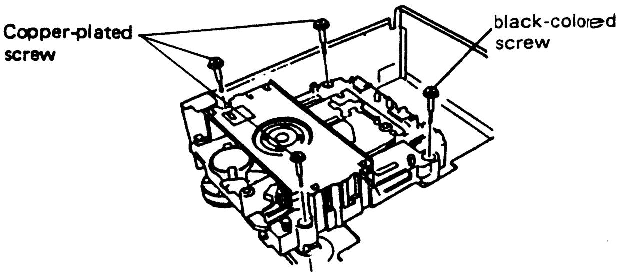
1. Remove the top cover.
2. Turn the power on and press the OPEN / CLOSE button to move the tray out. Then turn the power off.
3. While pressing the tray stopper, pull the tray toward front to move out it.
4. If the power cannot be turned on due to a malfunction, etc., turn the plastic screw located on the bottom under the front panel in the direction of the arrow (clockwise) to move the tray out foward.



> NOTE :
> Never turn the plastic screw counterclockwise as this may cause a malfunction

(9) Removing the CD mechanism assenbly

1. Remove the top cover.
2. Disconnect the connectors P701,P702,P703,P704.
2. Remove the three copper-plated screws and the black colored screw holding the mechanism assembly.
3. While lifting the back of the mechanism assembly (at this time, pay attention to the power supply section), remove it by pulling slightly upward.

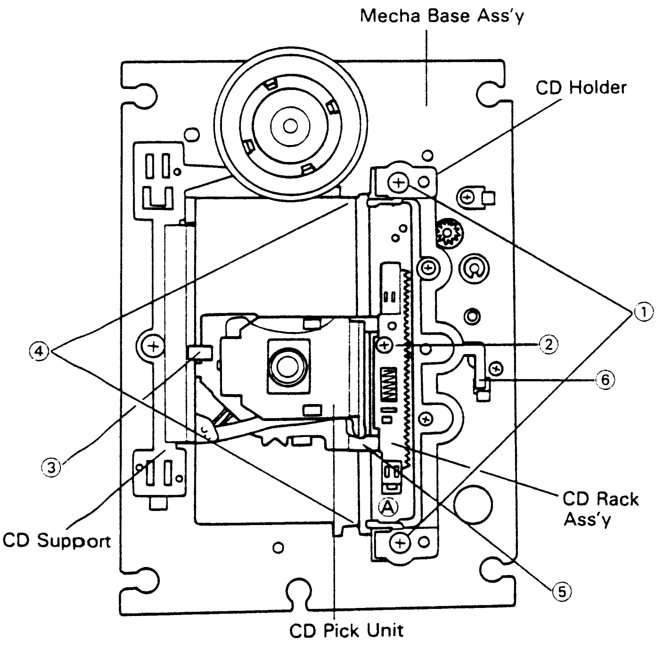


(10) Removing the CD P.C. Board

1. Remove the four screws retaining the P.C. Board .
2. Remove the CD P.C. Board by lifting it up.

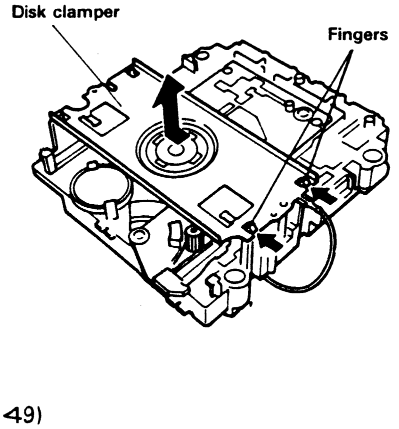
(11) Laser pickup removal

1. Remove the top cover and tray assembly.
2. Remove the front panel.
3. Remove the mechanism assembly.
4. Move the PICKUP UNIT from rest position to the center pushing ⑤point with finger.
5. Remove the screw ① from the mecha base Asse'y.
6. Remove the CD HOLDER fastening the shaft from the mechabase Ass'y. (Release the hook ⑥)
7. Remove the screw ② from the CD RACK Ass'y.
8. Remove the CD RACK Ass'y.
9. Remove the CD PICKUP UNIT with the shaft.



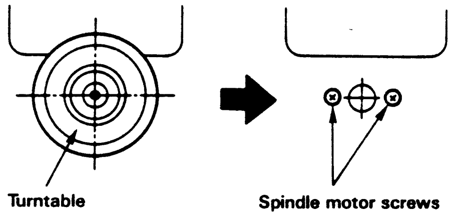
(12) Laser pickup instalation

1. While installing the ③ in the CD SUPPORT, set the shaft onthe base crook ④.
2. Install the CD HOLDER.
3. Install the CD RACK Ass'y in CD PICK UNIT.
   1) Install like inserting A at first.
   2) While pressing inB andC, fix screw ②.



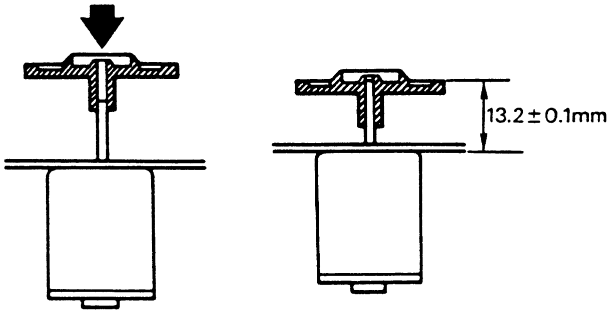
(13) Removing the spindle motor

1. Release the catches holding the disc clamper to remove the disc clamper.
2. Remove the turntable, and remove the two screws retaining the spindle motor.
3. Remove the mecha base Ass'y and unsolder the spindle and feed motor P.C. Board.

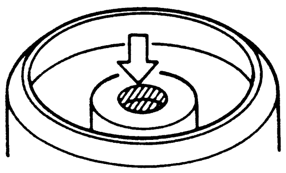


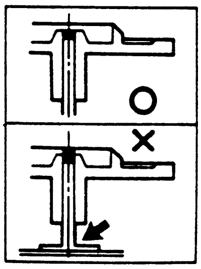
(14) Spindle motor installation

1. Tighten the 2 screws to the same torque.
2. Solder the spindle and feed motor P.C. Board.
3. Install the turntable. When installing, press straight down at the center of the turntable until the distance from the bottom of the mechanism base to the top of the turntable is exactly 13.2 ± 0.1mm.



4. After insertion is complete, bond the motor shaft and turntable together (at the section marked by an arrow in the figure on the left below).

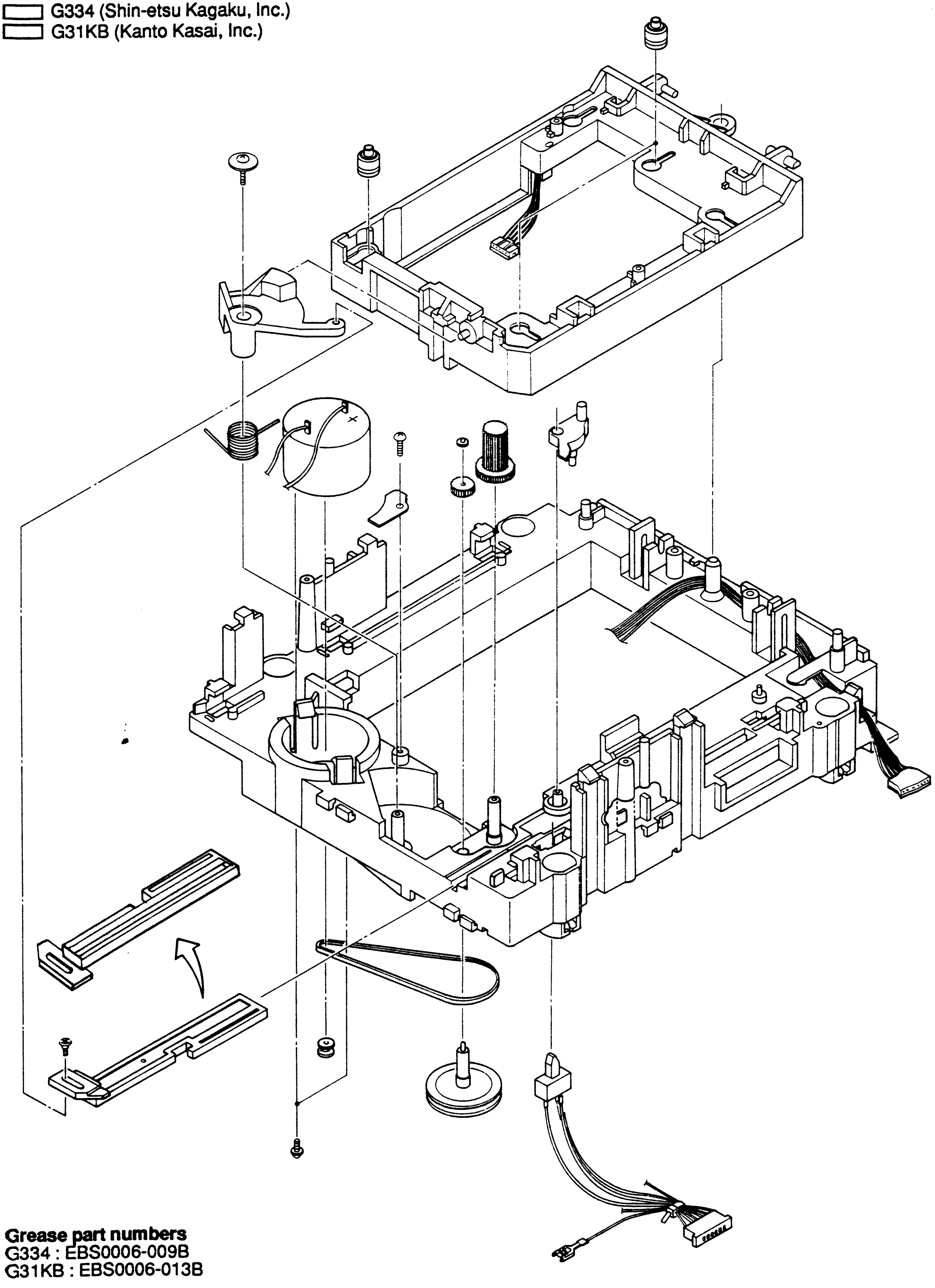




Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get on to the turntable, Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an arrow in the figure on the right).

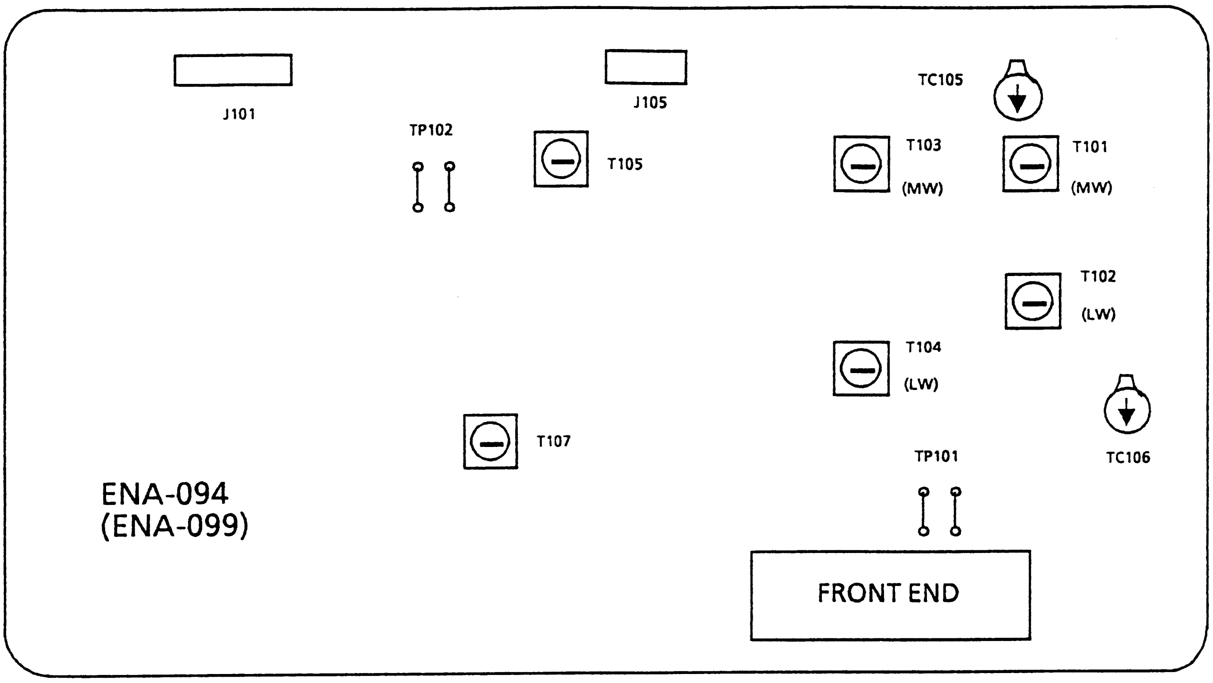
Application Points for Grease (CD mechanism Ass'y)

Grease used
☐ G334 (Shin-etsu Kagaku, Inc.)
☐ G31KB (Kanto Kasai, Inc.)



Grease part numbers
G334 : EBS0006-009B
G31KB : EBS0006-013B

Alignment Procedures (Tuner)



3-1 Front -end Section

1. Set the frequency display to "108.0 MHz" and the FM MODE switch to "MONO" position.
2. Confirm that there is noise with no input signal.
3. Confirm that the output of test point "TP101" is 8.0 ± 2V.
4. Set the frequency display to "87.5MHz" and confirm that the output of test point "TP101" is 1.6 ± 1V.

3-2 IF, Detection and MPX

FM detector coil :T105

1. Connect a center-meter or a digital voltmeter to test point "TP102" , and tune to a 100.1 MHz signal (1kHz modulation, 75kHz or 40kHz deviation) with SSG ATT 70dB.
2. Adjust T105 so that the center-meter indicates "0" or the digital voltmeter reads 0 ± 1.5 mV.

3-3 LW Section (for Euope only)

LW oscillator coil : T104

1. Set the frequency display to 144 kHz.
2. Adjust T104 to obtain 0.8 ± 0.4V at test point "TP101".
3. Set the frequency display to 353 kHz and confirm that the output of test point "TP101" is 7.7 ± 0.6V.

In case of Italy

1. Set the frequency display to 144kHz.
2. Adjust T104 to obtain 1.0 ± 0.1V at test point "T101".
3. Set the frequency display to 290kHz and confirm that the output of test point "TP101" is 5.7 ± 0.6V.

LW antenna coil : T102

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust T102 to obtain the best reception sensitivity at 164kHz.

LW antenna trimmer :TC106

6. Adjust TC106 to obtain the best receiving sensitivity on 353kHz.

In case of Italy

6. Adjust TC106 toobtain the best reception sensitivity at 245kHz.

3-4 MW Section

Note : ( ) ; Australia, the U.K. and Continental Europe

MW oscillator coil :T103

1. Set the frequency display to (522kHz) and confirm that the output of test point "TP101" is (0.9 ± 0.2V).
2. Set the frequency display to (1629kHz) and confirm that the outuput of test point "TP101" is (7.5 ± 0.8V).

Except for Australia, the U.K. and Continental Europe

1. Set the frequency display to (531kHz) and confirm that the output of test point "TP101" is 1.0 ± 0.2V.
2. Set the frequency display to (1602kHz) and confirm that the output of test point "TP101" is 7.2 ± 0.7V.

MW antenna coil :T101

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust T101 to obtain the best reception sensitivity at (603kHz).

MW antenna trimmer :TC105

6. Adjust TC105 to obtain the best reception sensitivity at (1404kHz).

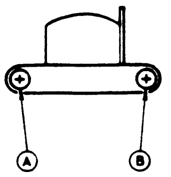
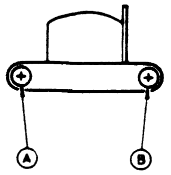
Adjustment Procedures (Cassette Deck)

(1) Measuring instruments necessary for Adjustment

1. Low frequency oscillator (Output of 0dbs should be obtain at the 600 ohm terminal at a frequency of 50Hz ~20kHz)
2. Attenuator (600 ohm impedance)
3. Electric voltmeter
4. STANDARD TAPES
   VTT-703L(for head azimuth adjustment)
   VTT-712 (for tape speed , wow & flutter)
   VTT-724 (standard level)
5. Recording standard tapes
   AC-513 (CrO2), TS-5 (SF) or equivalent. (Use the standard tape specified by JVC Audio Division.)
6. 600-ohm impedance (for attenuator matching)
7. Distortion factor meter (bandpass filter)
8. Torque gauge : CTG-N (cassette type)
9. C-120 tape (for checking the tape running)

(2) Adjustment and repairing the mechanism

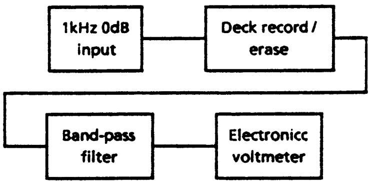
(Adjust and check the mechanism before adjusting the electric circuit)

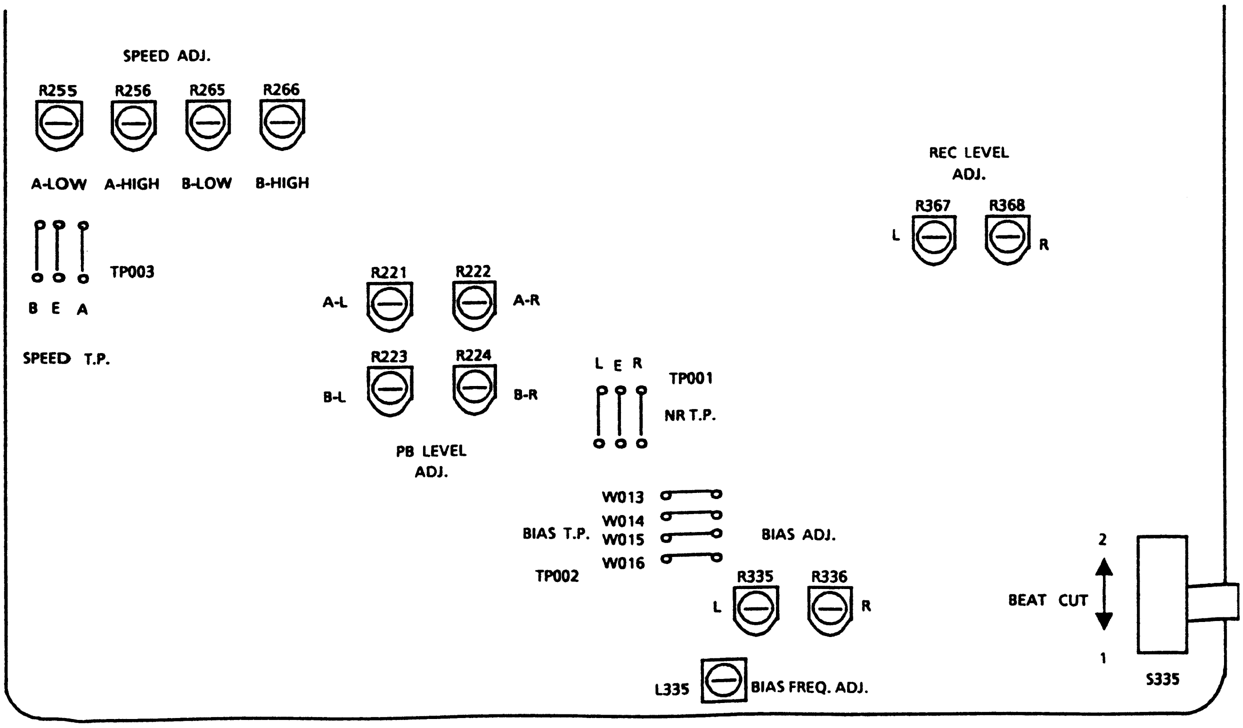
Item	Adjustment method	Standard value	Remarks
Adjusting azimuth of rec/play head	1. Connect the output from the SPK OUT terminal to the voltmeter.(At about 1 volt) 2. Play back VTT-703L		1) When the specified characteristic cannot be obtained because of head wear, cut wire, excessive magnetization, etc., replace the head and adjust the head azimuth. Also, perform the adjustment of the playback level, recording bias current, recording level, etc. 2) When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head to avoid complaints.
A mechanism 	3. Adjust screw A so that the output of the voltmeter becomes maximum when PLAY ▶) is pressed.	Maximum	
	4. Paint screw A and B with screw locking compound so they do not come loose after adjustment.		
B mechanism 	5. Adjust screw A so that the output of the voltmeter becomes maximum when PLAY (▶) is pressed.	Maximum	
	6. Adjust screw B so that the output of the voltmeter becomes maximum when PLAY (◀) is pressed.	Maximum	
	7. Paint screws A and B with screw locking compound so they do not come loose after adjustment.		
Playback torque	Measure the torque in the playback mode using the torque measurement cassette CTG-N.	30 ~ 65 g-cm	When the standard torque cannot be obtained, clean or replace the take-up disc assembly.
Fast forward torque	Measure the torque in the fast forward mode by the same procedure.	75 ~ 130 g-cm	When the standard torque cannot be obtained, 1) Clean the capstan belt, rim of the fly-wheel, motor pulley, etc. 2) Change the belt, idler, etc.
Rewind torque	Measure the torque in the rewind mode by the same procedure.	75 ~ 130 g-cm	When the standard torque cannot be obtained, clean the motor pulley, capstan, rim of the fly-wheel, rim of the supply reel disc, etc.
Wow & flutter	Play back VTT-712 and attach the wow & flutter meter to the SPK OUT terminals of this unit; its reading should be within 0.16% (WRMS).		As a complaint may occur if the wow & flutter fluctuates by 0.1% even though it is allowed in the standard, repairing is required.

3) Electrical Circuit Adjustments

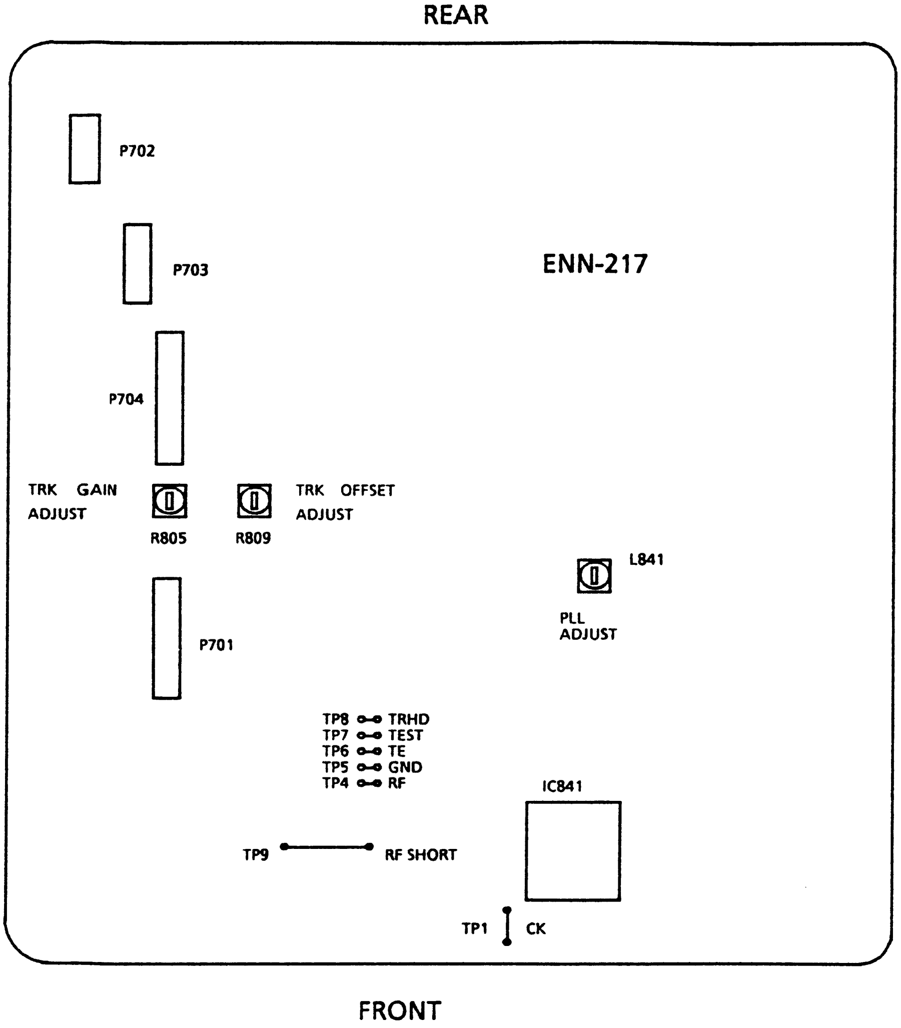
Make the following adjustments after adjusting the head azimuth.
In principle, the adjustments should be made in the following sequence.
Set the NR switch to OFF and the BEAT CUT switch to "1".
Adjustments marked with an asterisk (*) should always be made after the head is replaced.

Item		Adjustment Method	Adjustment Location	Standard Value	Remarks
Motor speed		1. Playback VTT-712 with the deck set to TAPE and an electronic counter connected to the SPK OUT terminal.	Semi-fixed resistor of the audio PC Board		Connect a wow & flutter meter with a built-in electronic counter to the INPUT.
		2. Normal speed Adjustment 1) Mechanism A adj.: Play back deck A and adjust the semi-fixed resistor R255 on the motor drive PC Board by turning it so that the reading of meter is 3,000 Hz. 2) Mechanism B adj.: Play back deck B and adjust the semi-fixed resistor R265 by turning it so that the reading of meter is 3,000 Hz.	R255 R265	3,000 Hz	A-Mechanism : Short-circuit W032 and W033(TP003) when performing double-speed adjustment. B-Mechanism : Short-circuit W031 and W032(TP003) when performing double-speed adjustment, (Be sure to set the deck to the PLAY mode first before short-circuiting TP003. Do not operate the deck while it is short-circuited.)
		3. Double-speed adjustment 1) Mechanism A adj.: Play back deck A and adjust the semi-fixed resistor R256 by turning it so that the reading of meter is 6,000 Hz. 2) Mechanism B adj.: Play back deck B and adjust the semi-fixed resistor R266 by turning it so that the reading of meter si 6,000 Hz.	R256 R266	6,000Hz	
* 1	Playback level	Playback VTT-724 (1 kHz) and adjust so that the output among W022(L), W021(E) of TP001 and W020(R), W021(E) of TP001 is -5.5dBs.	A (L) R221 (R) R222 B (L) R223 (R) R224	−5.5dbs	The playback level varies when the head is replaced so should be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
* 2	Recording bias frequency	Connect a frequency counter between W015 and W016 of TP002 and perform recording with a CrO$_2$ tape.	L335	105 kHz +2 kHz −5 kHz	
* 3	Recording frequency response	Record 100 Hz/1 kHz/10 kHz with the NR switch off and -30 dbs input from AUX. While playing back these recorded signals, adjust the variation of the 100 Hz and 10 kHz outputs from the 1kHz output to the standard value using R335 and R336. (Basically, adjust so that the 1 kHz and 10 kHz outputs are flat.)	R335(L) R336(R)	0±3 dB for 100 Hz and 10 kHz with 1 kHz as the standard.	1) The recording and playback frequencies of a cassette deck are adjusted by adjusting the bias. This is because the frequency response depends more on the bias current than with an open-reel deck. 2) Perform the adjustment with normal tape and confirm that the values are within the range for CrO$_2$ tape.
		Note : After completing the recording level adjustment in item 3, check the recording and playback frequencies with the NR switch on. Fine adjust again if the value is 0±4 dB or more at 1 kHz and 10 kHz.			

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
* 4	Recording Level	1) Add a 1 kHz (-8 dbs) input to the AUX terminal and record on the left and right channels using normal tape. 2) When playing this back, adjust the recording signal current so that output among W022(L), W021(E) of TP001 and W020(R), W021(E) of TP001 is -5.5dbs.	R367(L) R368(R)	-5.5dbs	Adjust with normal tape and make sure that the level difference is 1.5 dB or less with CrO2 tape and that the left/right level difference is 1.0 dB or less.
* 5	Recording/ playback distortion check	1) Record a 1 kHz (-8 dbs) AUX input signal. 2) Play this back and check the output with a distortion meter to make sure it is the rated value.		3% or less with normal tape or CrO2 tape.	Perform after the bias current and recording level adjustments.
6	Recording/ playback S/N ratio check	1) Record 1 kHz (-8dB) AUX output signal, While recording, remove the input and record without a signal. 2) Play this back and use an electronic voltmeter to compare the 0 dB recording output and the out-put of the recording without a signal to make sure this is the rated value.		45 dB or more with normal tape or CrO2 tape	
7	Erase ratio check	1) Record a 1 kHz (0 dB) AUX input signal. 2) Rewind and erase part of the recorded section. 3) Compare the outputs of the recorded and erased sections using an electronic voltmeter.		60 dB or more	Connect a 1 kHz band-pass filter between the deck and electronic Voltmeter When making the adjustment.  1kHz 0dB input Deck record / erase Band-pass filter Electronicc voltmeter
8	Auto-stop check	When playing back and recording, make sure to operate AUTO STOP.			


SPEED ADJ.
R255
R256
R265
R266
A-LOW
A-HIGH
B-LOW
B-HIGH
TP003
B E A
SPEED T.P.
R221
R222
A-L
A-R
R223
R224
B-L
B-R
PB LEVEL ADJ.
L E R
TP001
NR T.P.
W013
W014
W015
W016
BIAS T.P.
TP002
BIAS ADJ.
R335
R336
L
R
L335
BIAS FREQ. ADJ.
REC LEVEL ADJ.
R367
R368
L
R
2
BEAT CUT
1
S335

Adjustment Procedures (CD)


REAR
P702
P703
ENN-217
P704
TRK GAIN ADJUST
R805
R809
TRK OFFSET ADJUST
L841
PLL ADJUST
P701
TP8 TRHD
TP7 TEST
TP6 TE
TP5 GND
TP4 RF
IC841
TP9
RF SHORT
TP1
CK
FRONT

(1) PLL free-running adjustment

a. Measuring instrument
   Frequency counter

b. Adjusting procedure
   1. Connect a frequency counter with TP1 (CK) and TP5 (GND) on the main PC board.
   2. Short circuit TP9(RF SHORT) to TP5(GND).
   3. Adjust L841 for setting the frequency counter's value becomes 4.320 ± 0.005MHz.
   4. Perform this adjustment immediately after the power is turned on.

(2) Tracking gain adjustment

a. Measuring instruments
   Oscilloscope, Normal disc

b. Adjusting procedure
   1. Connect an oscilloscope with TP6 (TE) and TP5 (GND) on the main PC board.
   2. Play the disc.
   3. Short circuit TP7 (TEST) to TP5 (GND).
   4. Adjust R805 for setting tracking error signal becomes 2.0 V_{P-P}.

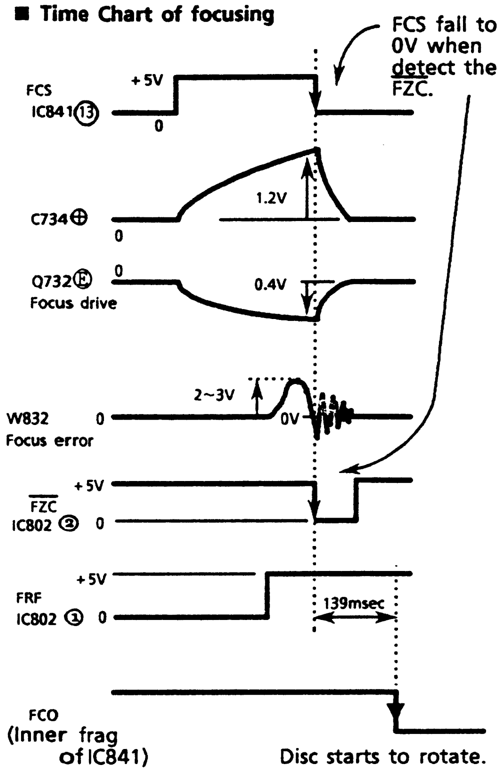
(3) Tracking offset adjustment

a. Measuring instruments
   Oscilloscope, Normal dis

b. Adjusting procedure
   1. Connect an oscilloscope cwith TP6 (TE) and TP5 (GND) on the main PC board.
   2. Play the disc.
   3. Short circuit TP7 (TEST) to TP5 (GND).
   4. Adjust R809 for setting the DC level of the tracking error (off set) becomes 0.

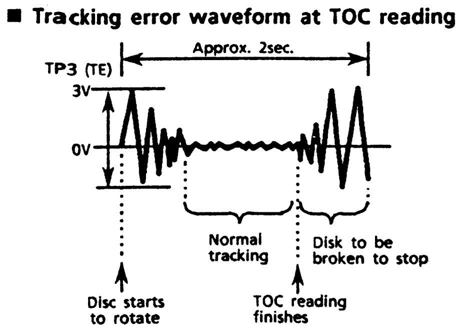
   Note: Adjust R809 for setting the waveform becomes symmetrical around the 0 level.

Flow of Functional Operation Until TOC is Read



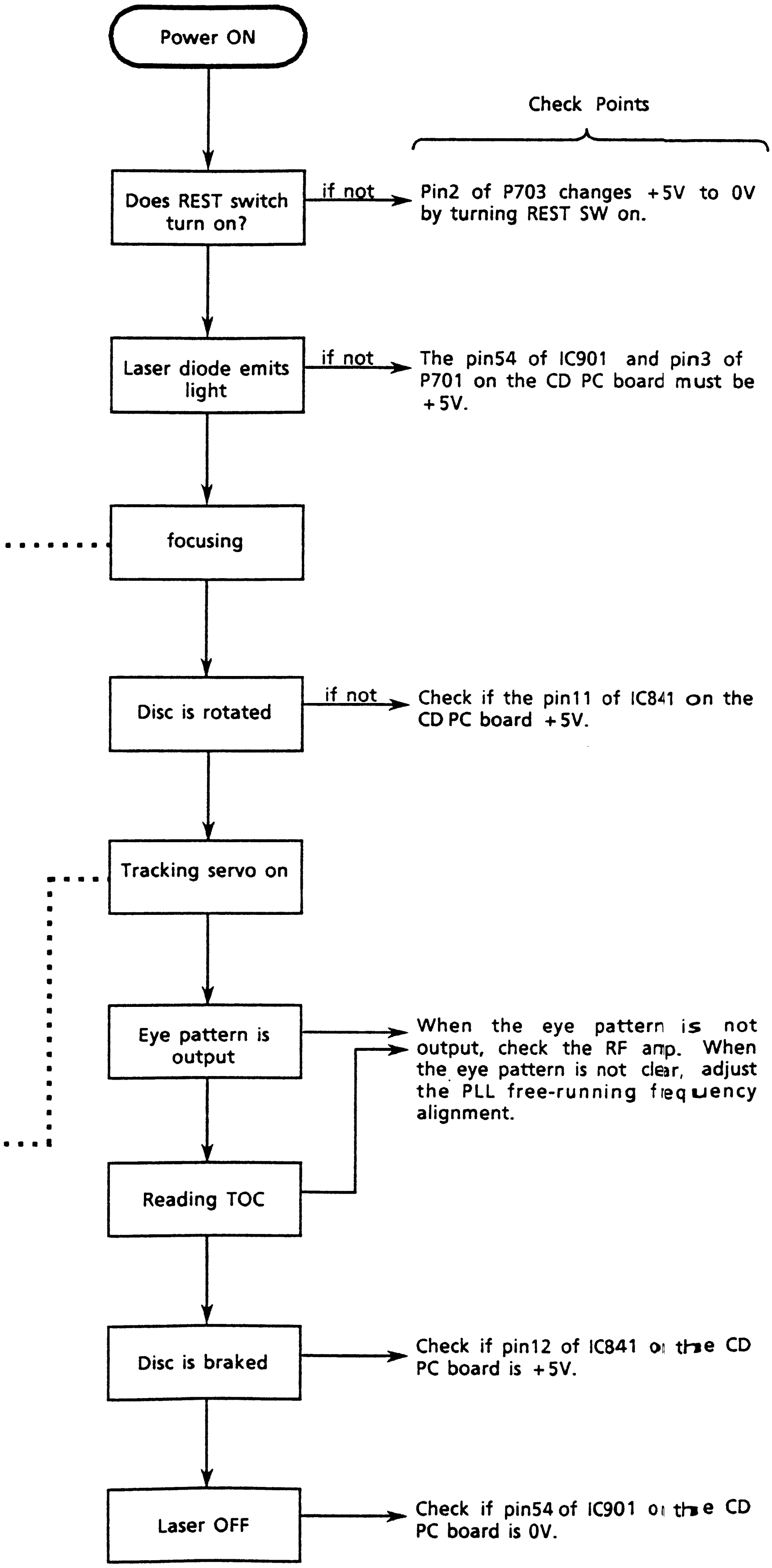
- When the lens moves up and down in a 2-seconds interval, FZC is not output.
- When the lens moves up and down in less than 1-second, FRF is not output or the focus servo loop is abnormal.

Fig-1



- Check the tracking offset and align it to 0.

Fig-2


Power ON
Check Points
Does REST switch turn on?
if not
Laser diode emits light
if not
focusing
Disc is rotated
if not
Tracking servo on
Eye pattern is output
Reading TOC
Disc is braked
Laser OFF

Pin2 of P703 changes +5V to 0V by turning REST SW on.

The pin54 of IC901 and pin3 of P701 on the CD PC board must be +5V.

Check if the pin11 of IC841 on the CD PC board +5V.

When the eye pattern is not output, check the RF amp. When the eye pattern is not clear, adjust the PLL free-running frequency alignment.

Check if pin12 of IC841 on the CD PC board is +5V.

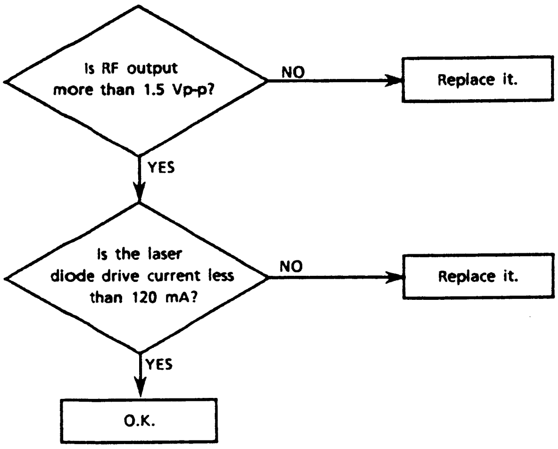
Check if pin54 of IC901 on the CD PC board is 0V.

Maintenance of Laser Pickup
Replacement of Laser Pickup

(1) Life of the laser diode

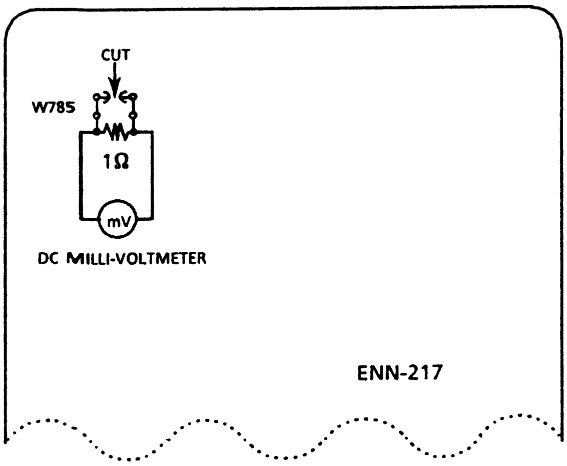
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output: amplitude of eye pattern) will be low.
2. The drive current required by the laser diode will be increased.
   In such a case, check the life of the laser diode following the flowchart below


Is RF output more than 1.5 Vp-p?
NO
Replace it.
YES
Is the laser diode drive current less than 120 mA?
NO
Replace it.
YES
O.K.

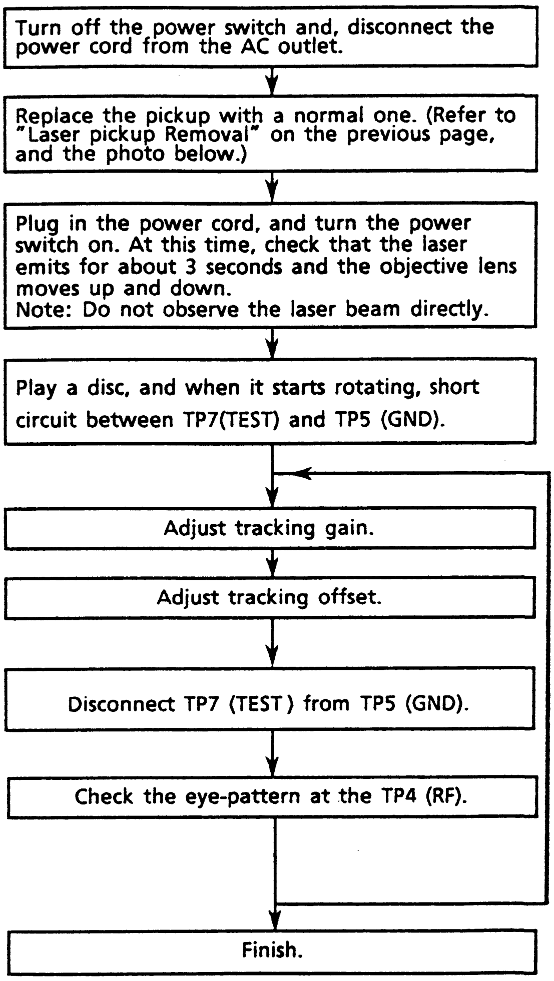
(2) Measurement of laser diode drive current

Replace the jump wire (W785) shown below with the resistor (1Ω).
Measure the voltage across the resistor with a milli-voltmeter. When the voltage is more than 120mV, it shows that the life of the laser diode has expired



(3) Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.



Turn off the power switch and, disconnect the power cord from the AC outlet.

Replace the pickup with a normal one. (Refer to "Laser pickup Removal" on the previous page, and the photo below.)

Plug in the power cord, and turn the power switch on. At this time, check that the laser emits for about 3 seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.

Play a disc, and when it starts rotating, short circuit between TP7(TEST) and TP5 (GND).

Adjust tracking gain.

Adjust tracking offset.

Disconnect TP7 (TEST) from TP5 (GND).

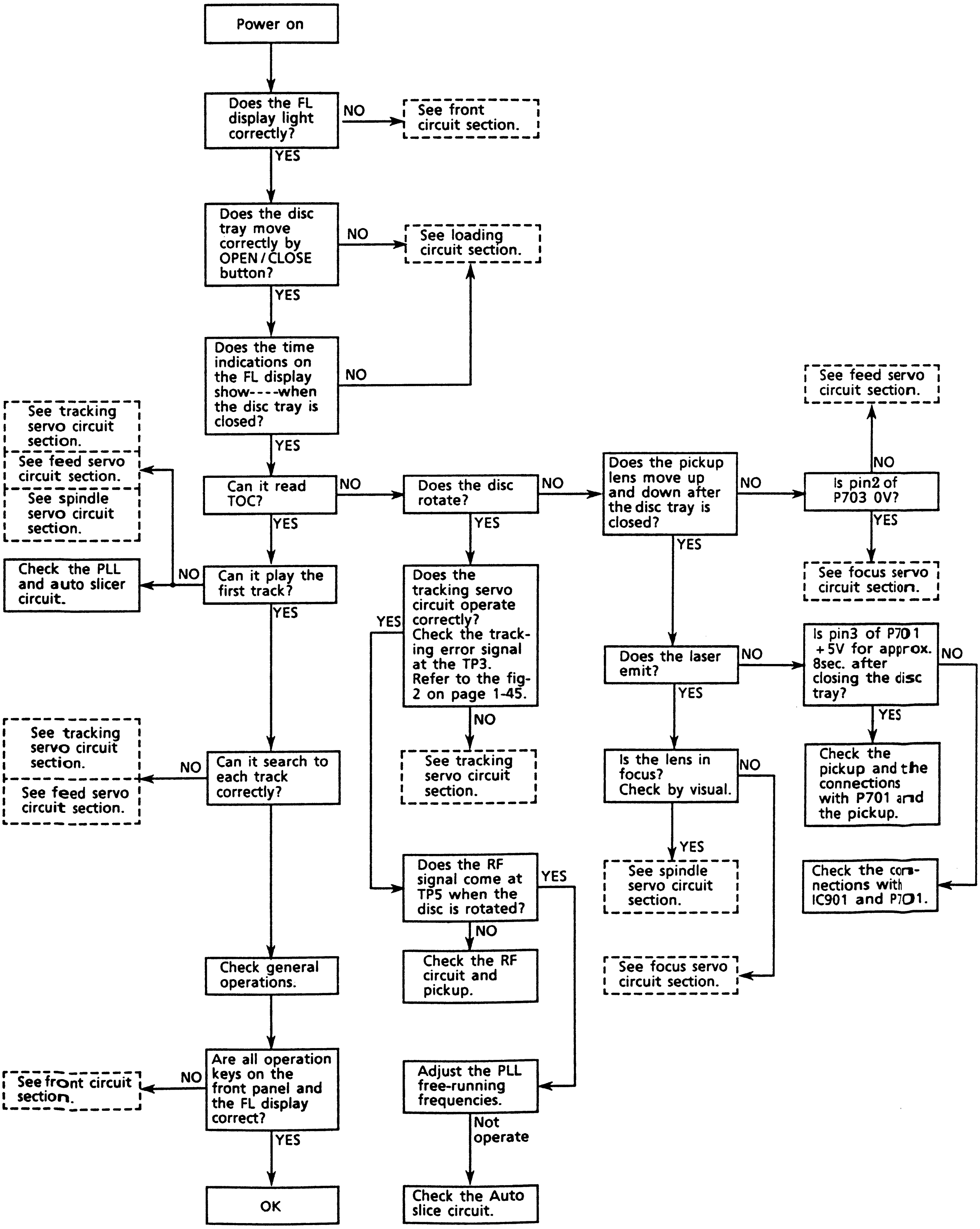
Check the eye-pattern at the TP4 (RF).

Finish.

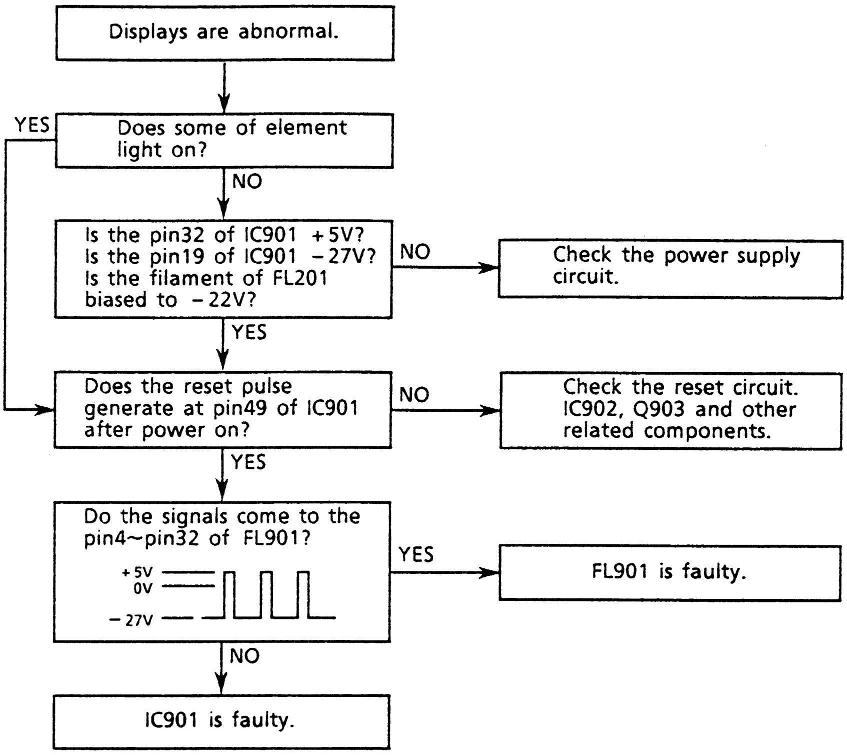
Note: Since one adjustment may affect other settings, repeat these adjustments a few times.

Troubleshooting

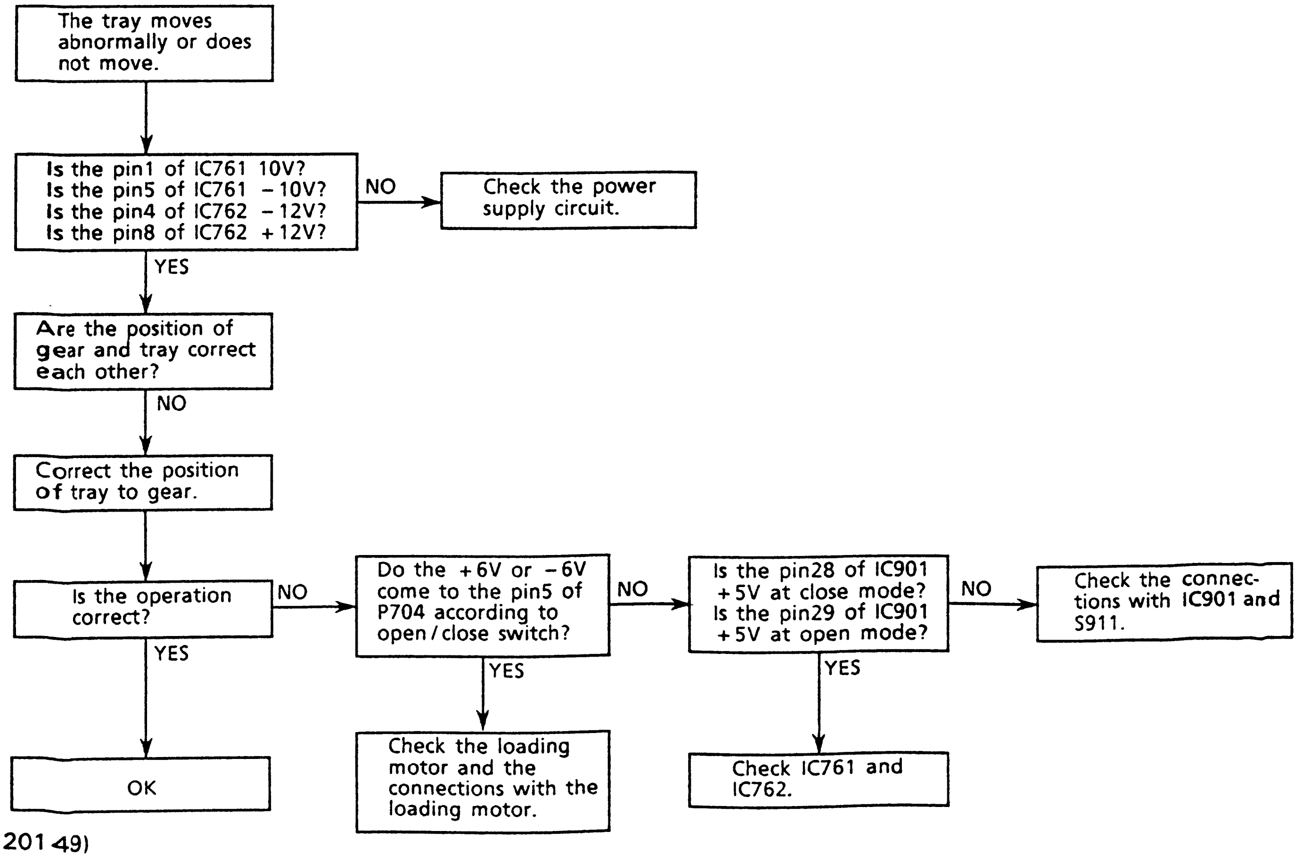
The following flowchart shows each circuit's condition about from "power on" until "ready to play".


Power on
Does the FL display light correctly?
NO
See front circuit section.
YES
Does the disc tray move correctly by OPEN / CLOSE button?
NO
See loading circuit section.
YES
Does the time indications on the FL display show----when the disc tray is closed?
NO
YES
See tracking servo circuit section.
See feed servo circuit section.
See spindle servo circuit section.
Check the PLL and auto slicer circuit.
Can it read TOC?
NO
YES
Can it play the first track?
NO
YES
Does the disc rotate?
NO
YES
Does the tracking servo circuit operate correctly? Check the tracking error signal at the TP3. Refer to the fig-2 on page 1-45.
YES
NO
See tracking servo circuit section.
Does the pickup lens move up and down after the disc tray is closed?
NO
YES
See feed servo circuit section.
NO
Is pin2 of P703 0V?
YES
See focus servo circuit section.
Does the laser emit?
NO
YES
Is pin3 of P701 +5V for approx. 8sec. after closing the disc tray?
NO
YES
Check the pickup and the connections with P701 and the pickup.
Check the connections with IC901 and P701.
Is the lens in focus? Check by visual.
NO
YES
See spindle servo circuit section.
See focus servo circuit section.
See tracking servo circuit section.
See feed servo circuit section.
NO
Can it search to each track correctly?
Does the RF signal come at TP5 when the disc is rotated?
YES
NO
Check the RF circuit and pickup.
Check general operations.
Adjust the PLL free-running frequencies.
Not operate
Check the Auto slice circuit.
See front circuit section.
NO
Are all operation keys on the front panel and the FL display correct?
YES
OK

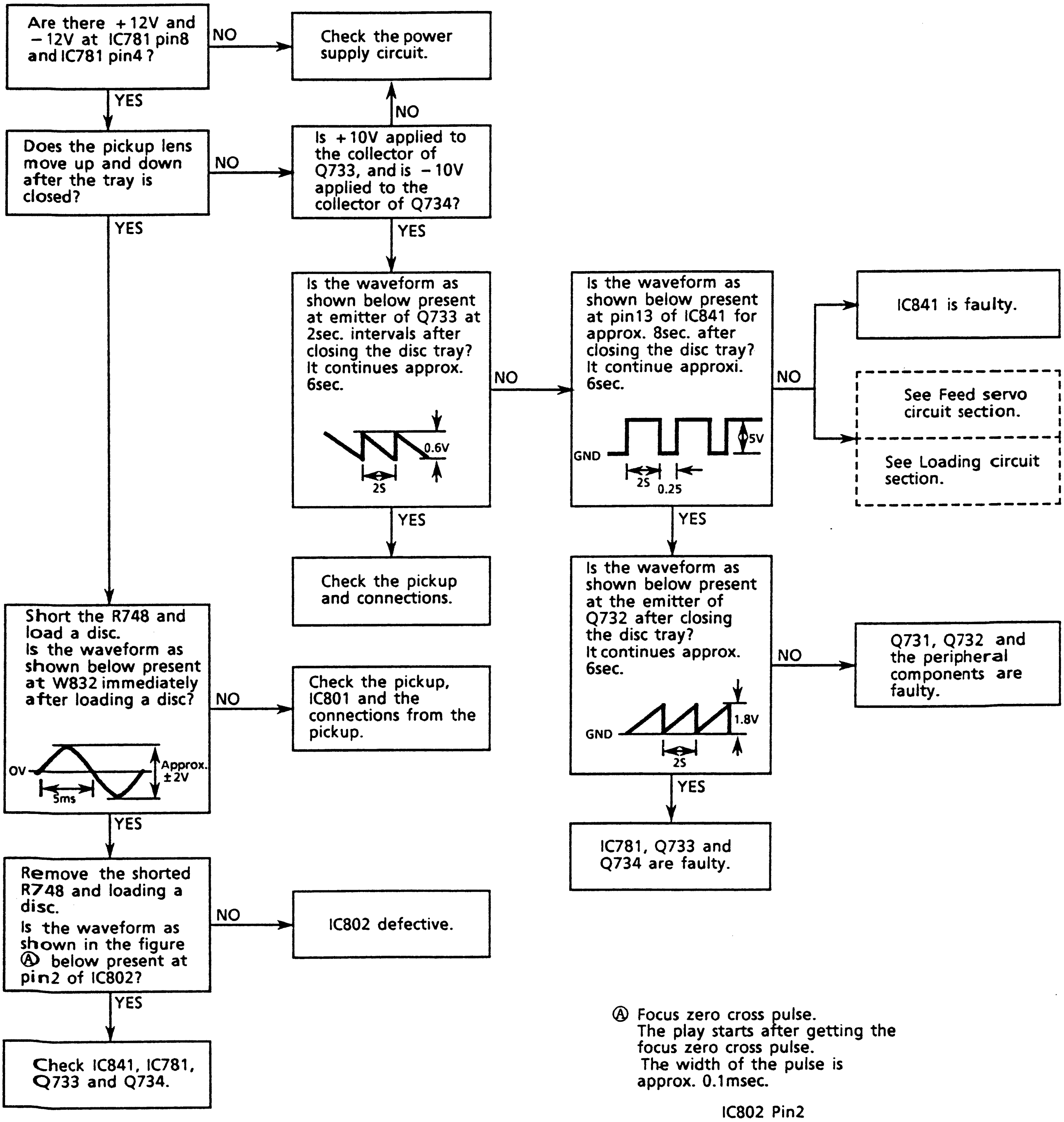
Front circuit Section


Displays are abnormal.
Does some of element light on?
YES
NO
Is the pin32 of IC901 +5V? Is the pin19 of IC901 -27V? Is the filament of FL201 biased to -22V?
NO
Check the power supply circuit.
YES
Does the reset pulse generate at pin49 of IC901 after power on?
NO
Check the reset circuit. IC902, Q903 and other related components.
YES
Do the signals come to the pin4~pin32 of FL901?
+5V
0V
-27V
YES
FL901 is faulty.
NO
IC901 is faulty.

Loading circuit section


The tray moves abnormally or does not move.
Is the pin1 of IC761 10V? Is the pin5 of IC761 -10V? Is the pin4 of IC762 -12V? Is the pin8 of IC762 +12V?
NO
Check the power supply circuit.
YES
Are the position of gear and tray correct each other?
NO
Correct the position of tray to gear.
Is the operation correct?
NO
Do the +6V or -6V come to the pin5 of P704 according to open/close switch?
NO
Is the pin28 of IC901 +5V at close mode? Is the pin29 of IC901 +5V at open mode?
NO
Check the connections with IC901 and S911.
YES
OK
YES
Check the loading motor and the connections with the loading motor.
YES
Check IC761 and IC762.

Focus servo circuit section


Are there +12V and −12V at IC781 pin8 and IC781 pin4?

Check the power supply circuit.

Does the pickup lens move up and down after the tray is closed?

Is +10V applied to the collector of Q733, and is −10V applied to the collector of Q734?

Is the waveform as shown below present at emitter of Q733 at 2sec. intervals after closing the disc tray? It continues approx. 6sec.

Check the pickup and connections.

Is the waveform as shown below present at pin13 of IC841 for approx. 8sec. after closing the disc tray? It continue approxi. 6sec.

IC841 is faulty.

See Feed servo circuit section.

See Loading circuit section.

Is the waveform as shown below present at the emitter of Q732 after closing the disc tray? It continues approx. 6sec.

Q731, Q732 and the peripheral components are faulty.

IC781, Q733 and Q734 are faulty.

Short the R748 and load a disc. Is the waveform as shown below present at W832 immediately after loading a disc?

Check the pickup, IC801 and the connections from the pickup.

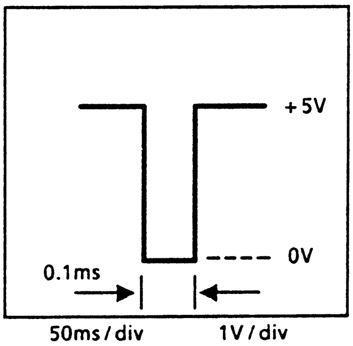
Remove the shorted R748 and loading a disc. Is the waveform as shown in the figure Ⓐ below present at pin2 of IC802?

IC802 defective.

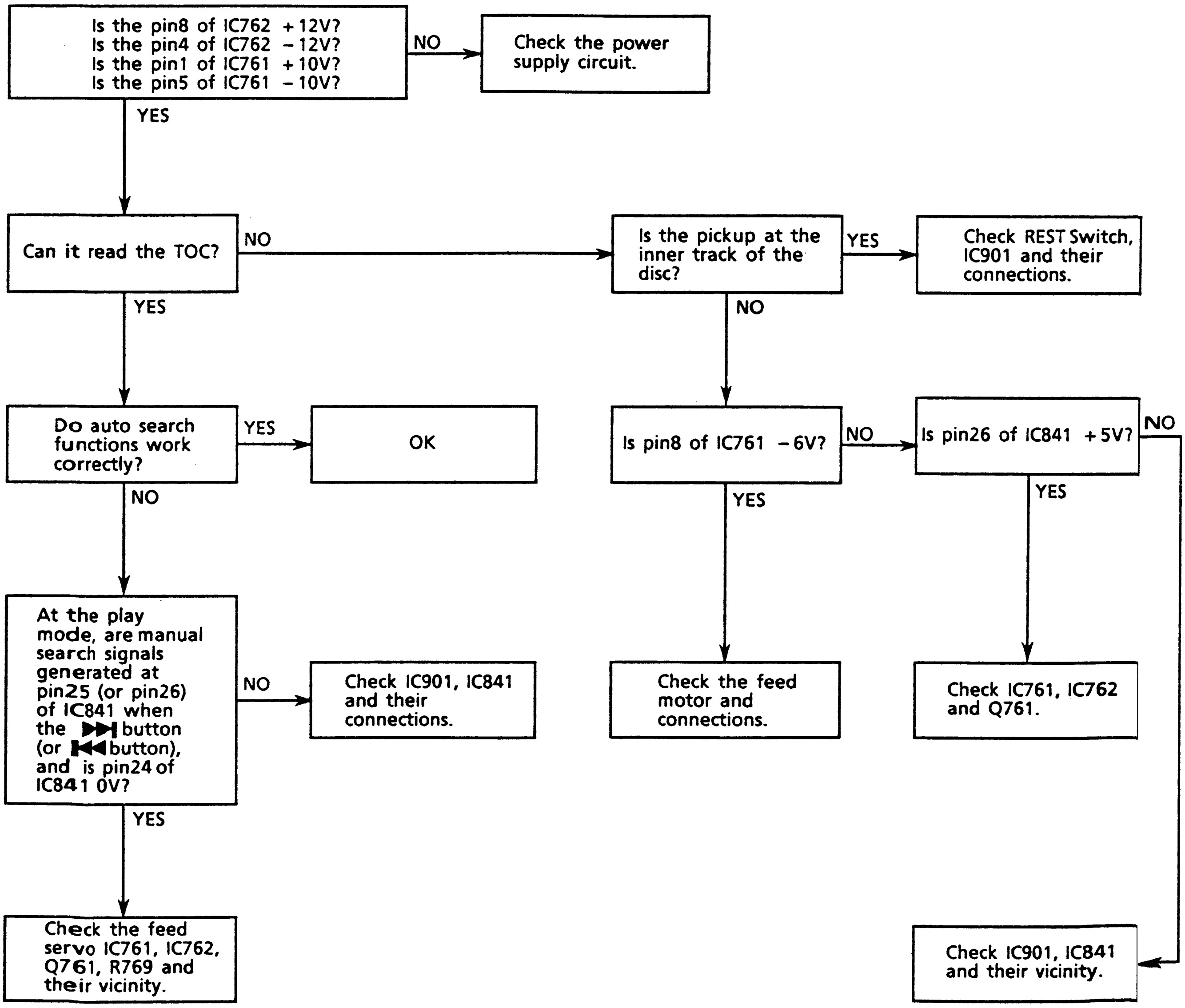
Check IC841, IC781, Q733 and Q734.

Ⓐ Focus zero cross pulse.
The play starts after getting the focus zero cross pulse.
The width of the pulse is approx. 0.1msec.

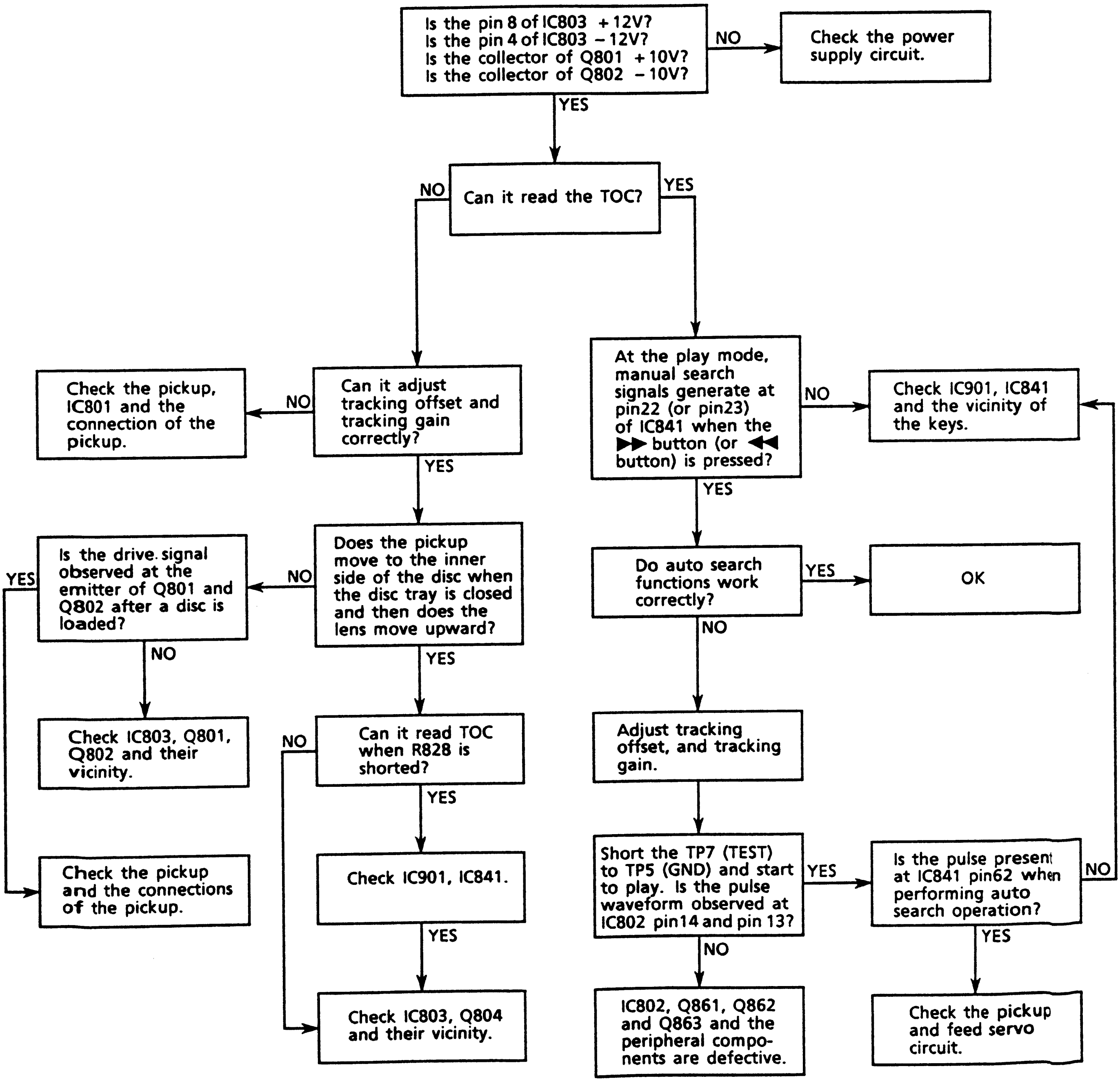
IC802 Pin2



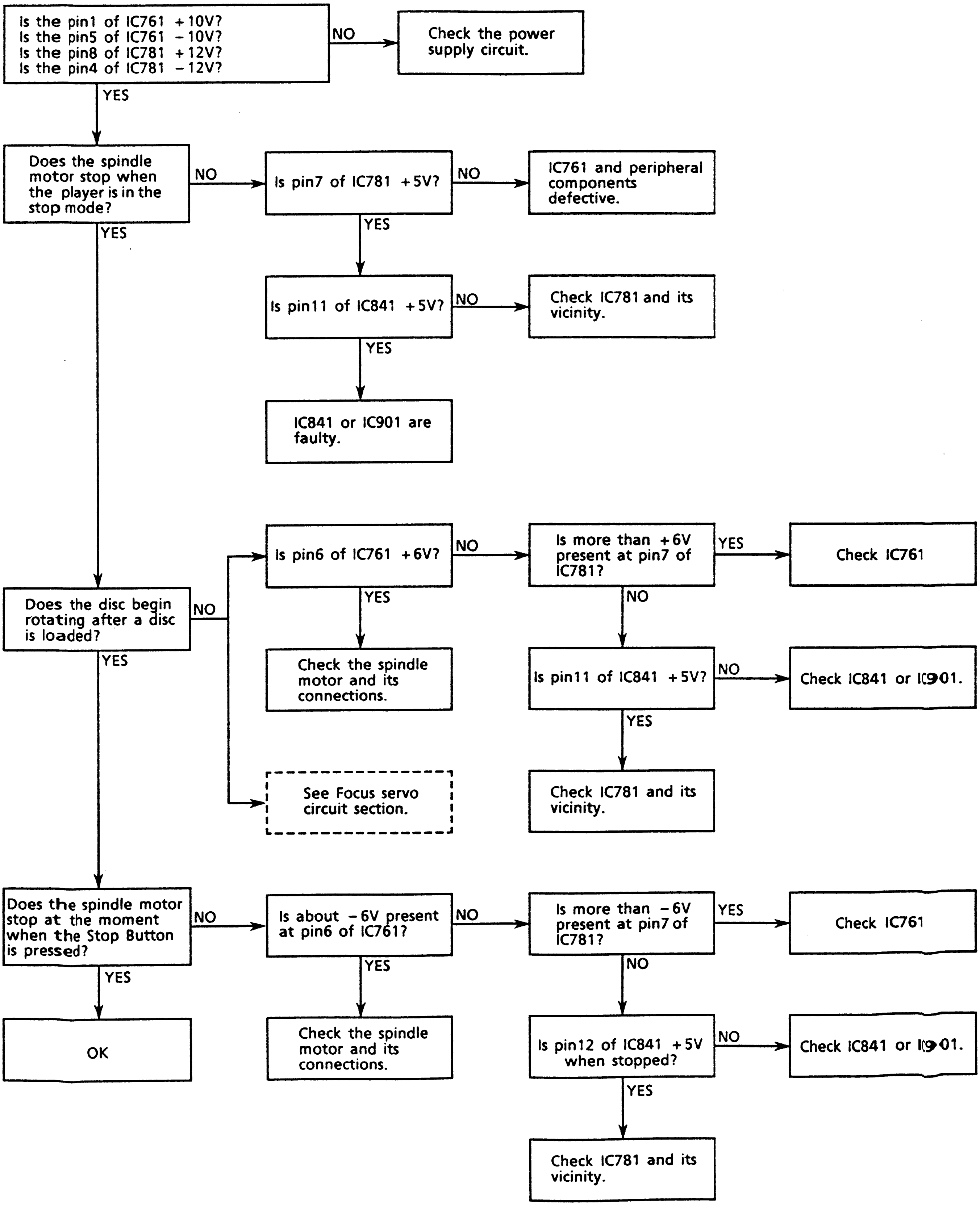
Feed servo circuit section


Is the pin8 of IC762 +12V?
Is the pin4 of IC762 −12V?
Is the pin1 of IC761 +10V?
Is the pin5 of IC761 −10V?
NO
Check the power supply circuit.
YES
Can it read the TOC?
NO
Is the pickup at the inner track of the disc?
YES
Check REST Switch, IC901 and their connections.
YES
NO
Do auto search functions work correctly?
YES
OK
Is pin8 of IC761 −6V?
NO
Is pin26 of IC841 +5V?
NO
NO
YES
YES
At the play mode, are manual search signals generated at pin25 (or pin26) of IC841 when the ▶▶I button (or I◀◀ button), and is pin24 of IC841 0V?
NO
Check IC901, IC841 and their connections.
Check the feed motor and connections.
Check IC761, IC762 and Q761.
YES
Check the feed servo IC761, IC762, Q761, R769 and their vicinity.
Check IC901, IC841 and their vicinity.

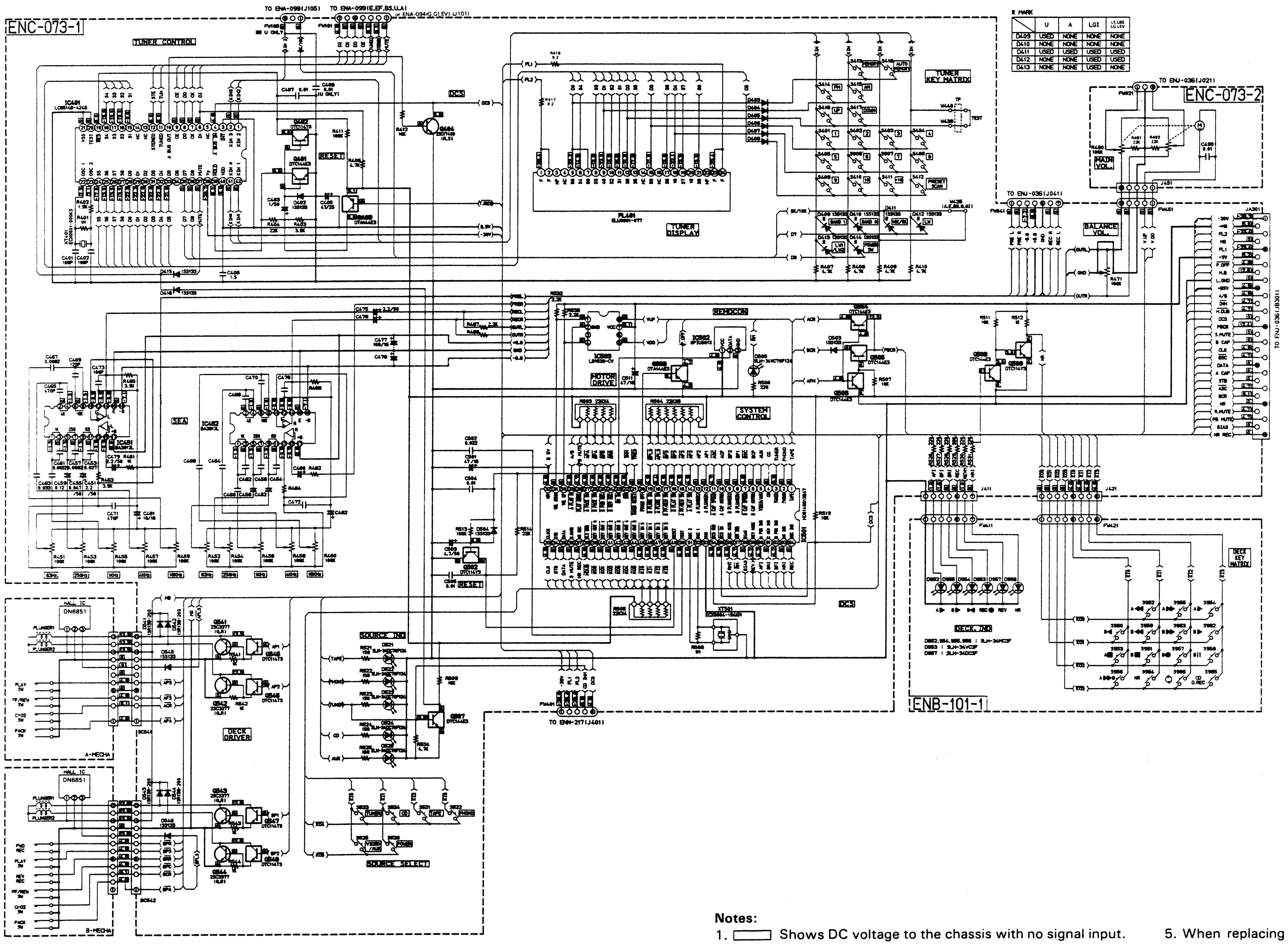
Tracking servo circuit section


Is the pin 8 of IC803 +12V?
Is the pin 4 of IC803 −12V?
Is the collector of Q801 +10V?
Is the collector of Q802 −10V?
NO
Check the power supply circuit.
YES
Can it read the TOC?
NO
YES
Can it adjust tracking offset and tracking gain correctly?
NO
Check the pickup, IC801 and the connection of the pickup.
YES
Does the pickup move to the inner side of the disc when the disc tray is closed and then does the lens move upward?
NO
Is the drive signal observed at the emitter of Q801 and Q802 after a disc is loaded?
YES
NO
Check IC803, Q801, Q802 and their vicinity.
Check the pickup and the connections of the pickup.
YES
Can it read TOC when R828 is shorted?
NO
YES
Check IC901, IC841.
YES
Check IC803, Q804 and their vicinity.
At the play mode, manual search signals generate at pin22 (or pin23) of IC841 when the ▶▶ button (or ◀◀ button) is pressed?
NO
Check IC901, IC841 and the vicinity of the keys.
YES
Do auto search functions work correctly?
YES
OK
NO
Adjust tracking offset, and tracking gain.
Short the TP7 (TEST) to TP5 (GND) and start to play. Is the pulse waveform observed at IC802 pin14 and pin 13?
YES
Is the pulse present at IC841 pin62 when performing auto search operation?
NO
YES
Check the pickup and feed servo circuit.
NO
IC802, Q861, Q862 and Q863 and the peripheral components are defective.

Spindle servo circuit section


Is the pin1 of IC761 +10V?
Is the pin5 of IC761 -10V?
Is the pin8 of IC781 +12V?
Is the pin4 of IC781 -12V?
NO
Check the power supply circuit.
YES
Does the spindle motor stop when the player is in the stop mode?
NO
Is pin7 of IC781 +5V?
NO
IC761 and peripheral components defective.
YES
YES
Is pin11 of IC841 +5V?
NO
Check IC781 and its vicinity.
YES
IC841 or IC901 are faulty.
Does the disc begin rotating after a disc is loaded?
NO
Is pin6 of IC761 +6V?
NO
Is more than +6V present at pin7 of IC781?
YES
Check IC761
YES
NO
Check the spindle motor and its connections.
Is pin11 of IC841 +5V?
NO
Check IC841 or IC901.
YES
See Focus servo circuit section.
Check IC781 and its vicinity.
YES
Does the spindle motor stop at the moment when the Stop Button is pressed?
NO
Is about -6V present at pin6 of IC761?
NO
Is more than -6V present at pin7 of IC781?
YES
Check IC761
YES
YES
NO
OK
Check the spindle motor and its connections.
Is pin12 of IC841 +5V when stopped?
NO
Check IC841 or IC901.
YES
Check IC781 and its vicinity.

■ System Control and FL Display Section


ENC-073-1
TO ENA-0991(J105)
TO ENA-0991(E,EF,B3,U,A)
TUNER CONTROL
IC401
DCS
RESET
TUNER DISPLAY
FL401
TUNER KEY MATRIX
TEST
TO ENJ-036(J021)
ENC-073-2
MAIN VOL.
TO ENJ-036(J041)
BALANCE VOL.
TO ENJ-036(JB301)
REMOCON
MOTOR DRIVE
SYSTEM CONTROL
SEA
IC501
RESET
SOURCE IND
SOURCE SELECT
DECK DRIVER
TO ENN-2171(J401)
DECK IND.
DECK KEY MATRIX
ENB-101-1
HALL IC
DN6851
A-MECHA
B-MECHA

※ MARK

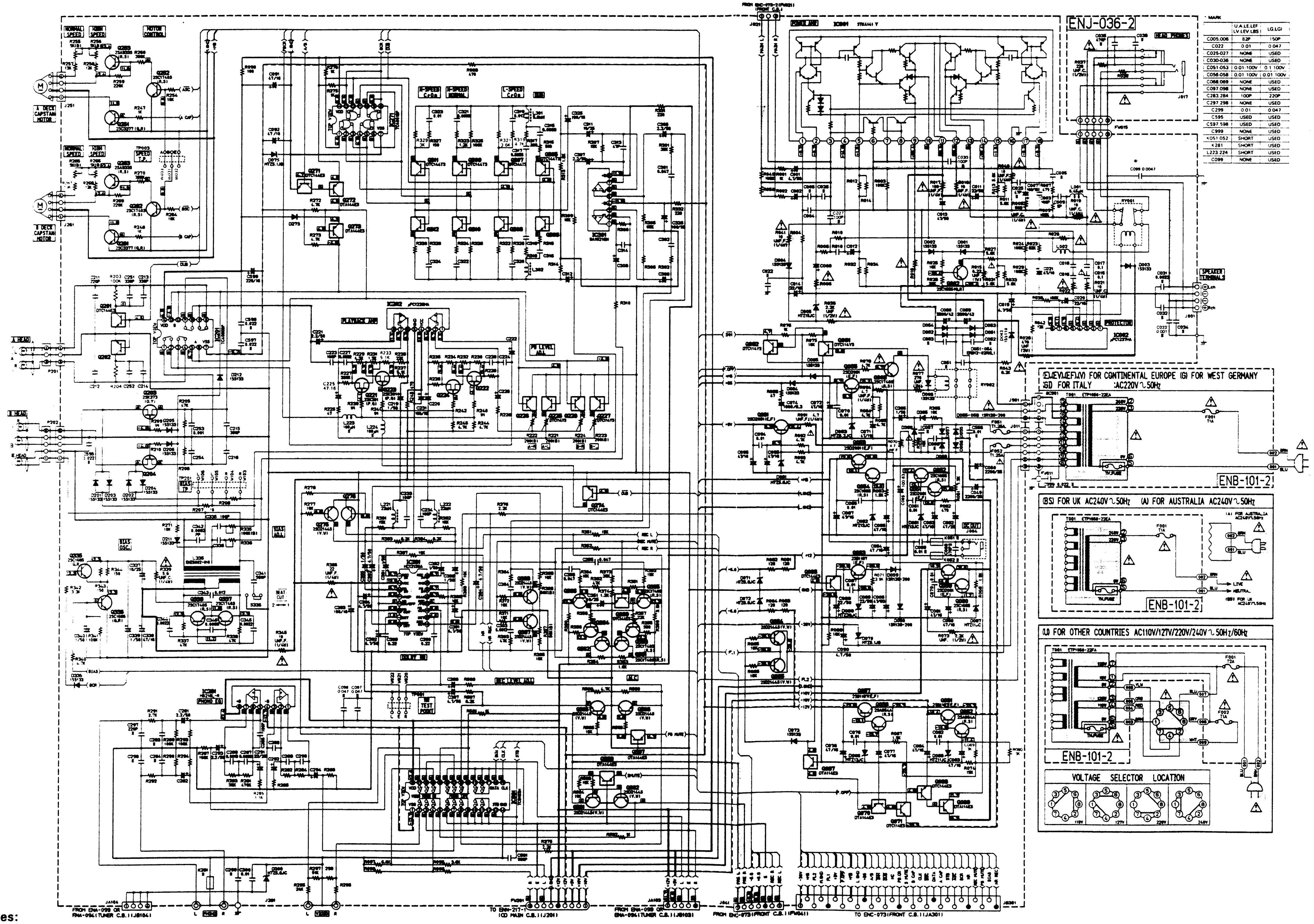
	U	A	LGI	LE.LBS LG.LEV
D409	USED	NONE	NONE	NONE
D410	NONE	NONE	NONE	NONE
D411	USED	USED	USED	USED
D412	NONE	NONE	USED	USED
D413	NONE	NONE	USED	NONE

Notes:

1. ▭ Shows DC voltage to the chassis with no signal input.
2. ——— indicates +B power supply.
3. -------- indicates −B power supply.
4. indicates signal path.
5. When replacing the parts in the darkned are (▬) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

Schematic Diagrams

■ Cassette and Power Primary Section


ENJ-036-2
HEAD PHONES
J017
POWER AMP
PROTECTOR
IC002 μPC1237HA
SPEAKER TERMINALS
J001
PLAYBACK AMP
PB LEVEL ADJ.
BIAS OSC.
REC LEVEL ADJ.
TEST POINT
A DECK CAPSTAN MOTOR
B DECK CAPSTAN MOTOR
MOTOR CONTROL
A HEAD
B HEAD
(E)(EV)(EF)(V) FOR CONTINENTAL EUROPE (G) FOR WEST GERMANY (GD) FOR ITALY AC220V ∿ 50Hz
T001 ETP1050-22EA
F001 T1A
BRN
BLU
ENB-101-2
(BS) FOR UK AC240V ∿ 50Hz (A) FOR AUSTRALIA AC240V ∿ 50Hz
(A) FOR AUSTRALIA AC240V∿50Hz
LIVE
NEUTRAL
(BS) FOR UK AC240V∿50Hz
ENB-101-2
(U) FOR OTHER COUNTRIES AC110V/127V/220V/240V ∿ 50Hz/60Hz
T001 ETP1050-22FA
F001 T2A
F002 T1A
ENB-101-2
VOLTAGE SELECTOR LOCATION
110V
127V
220V
240V

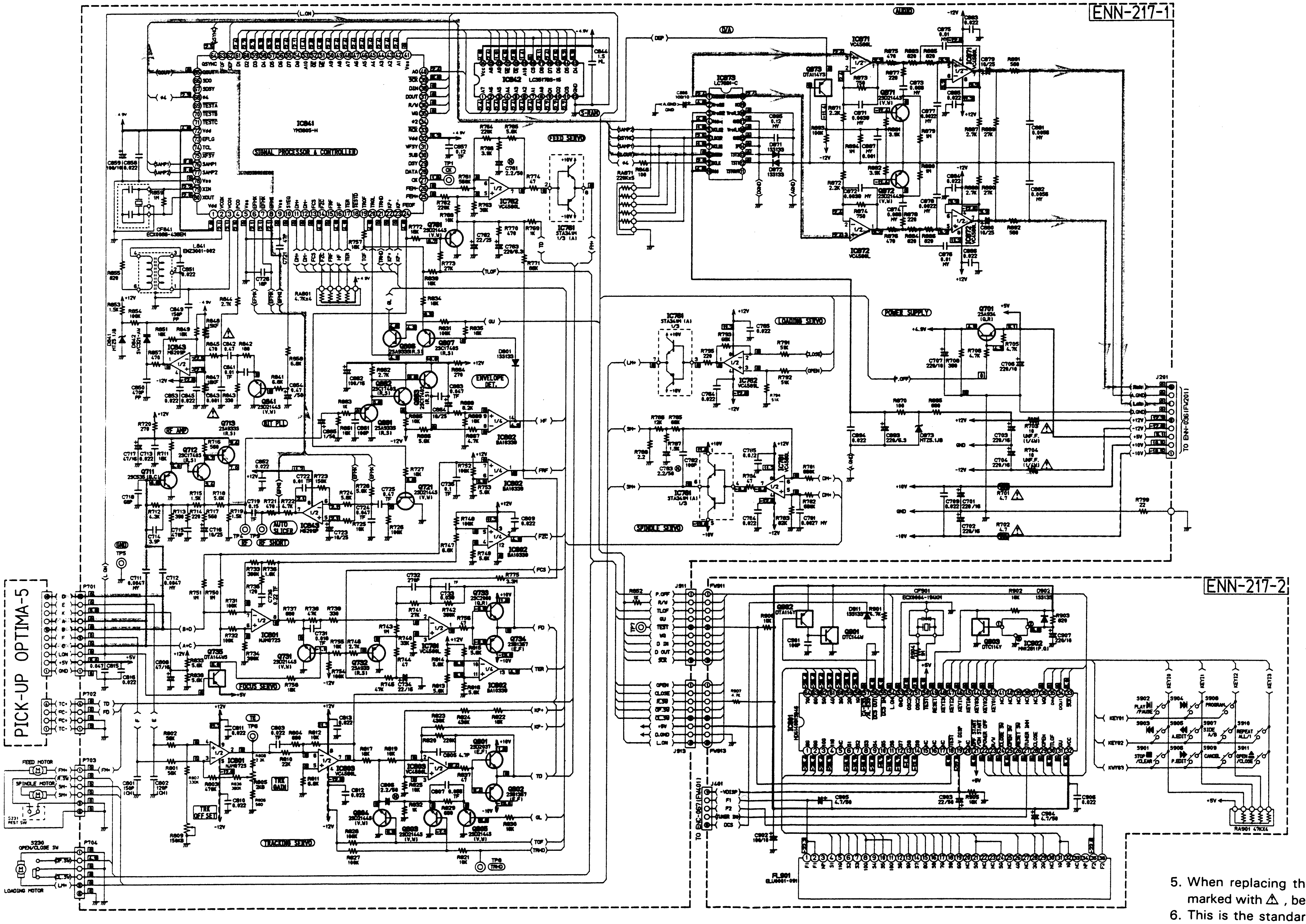
* MARK

	U.A.LE.LEF LV.LEV.LBS	LG.LGI
C005.006	82P	150P
C022	0.01	0 047
C025-027	NONE	USED
C030-036	NONE	USED
C051-053	0.01/100V	0.1 100V
C056-058	0.01 100V	0.01 100V
C068.069	NONE	USED
C097.098	NONE	USED
C283.284	100P	220P
C297.298	NONE	USED
C299	0.01	0.047
C595	USED	USED
C597.598	USED	USED
C999	NONE	USED
K051 052	SHORT	USED
K281	SHORT	USED
L223.224	SHORT	USED
C099	NONE	USED

Notes:

1. ▭ Shows DC voltage to the chassis with no signal input.
2. —— indicates +B power supply.
3. ------- indicates −B power supply.
4. indicates signal path.
5. When replacing the parts in the darkned are (▇) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

■ CD Section


ENN-217-1
ENN-217-2
PICK-UP OPTIMA-5
IC841 YM3805-H
SIGNAL PROCESSOR & CONTROLLER
IC842 LC3517BS-15
FEED SERVO
RF AMP
ENVELOPE DET.
AUTO SLICER
FOCUS SERVO
TRACKING SERVO
LOADING SERVO
SPINDLE SERVO
POWER SUPPLY
D/A
AUDIO
IC873 LC7881-C
IC871 VC4558L
IC872 VC4558L
TO ENN-065(FV201)
FEED MOTOR
SPINDLE MOTOR
LOADING MOTOR
FL901
CF901

Notes:

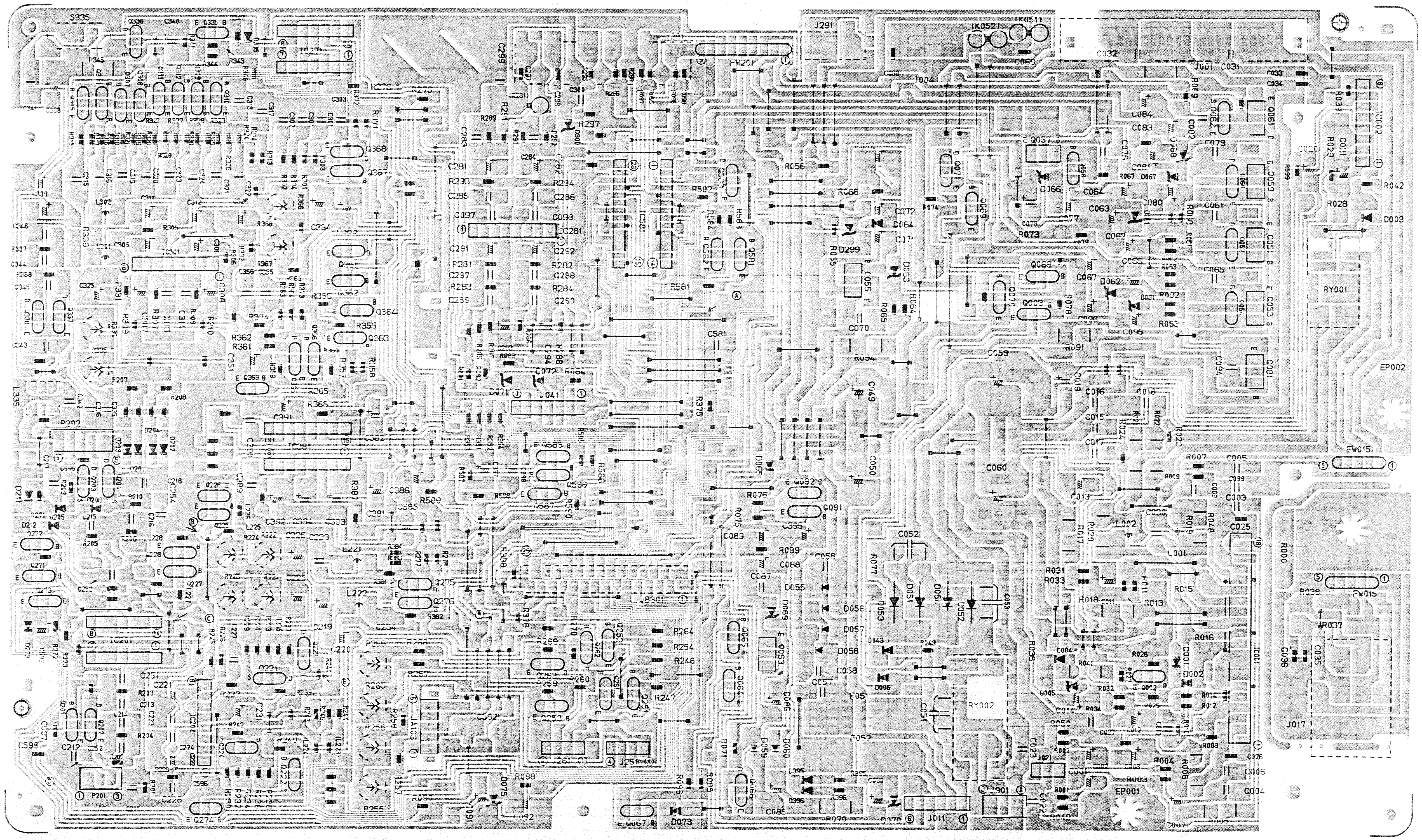
1. ▭ Shows DC voltage to the chassis with no signal input.
2.—— indicates +B power supply.
3.------- indicates −B power supply.
4. indicates signal path.

5. When replacing the parts in the darkned are (▬) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

CA-E33BK CA-E33LBK

Printed Circuit Boards

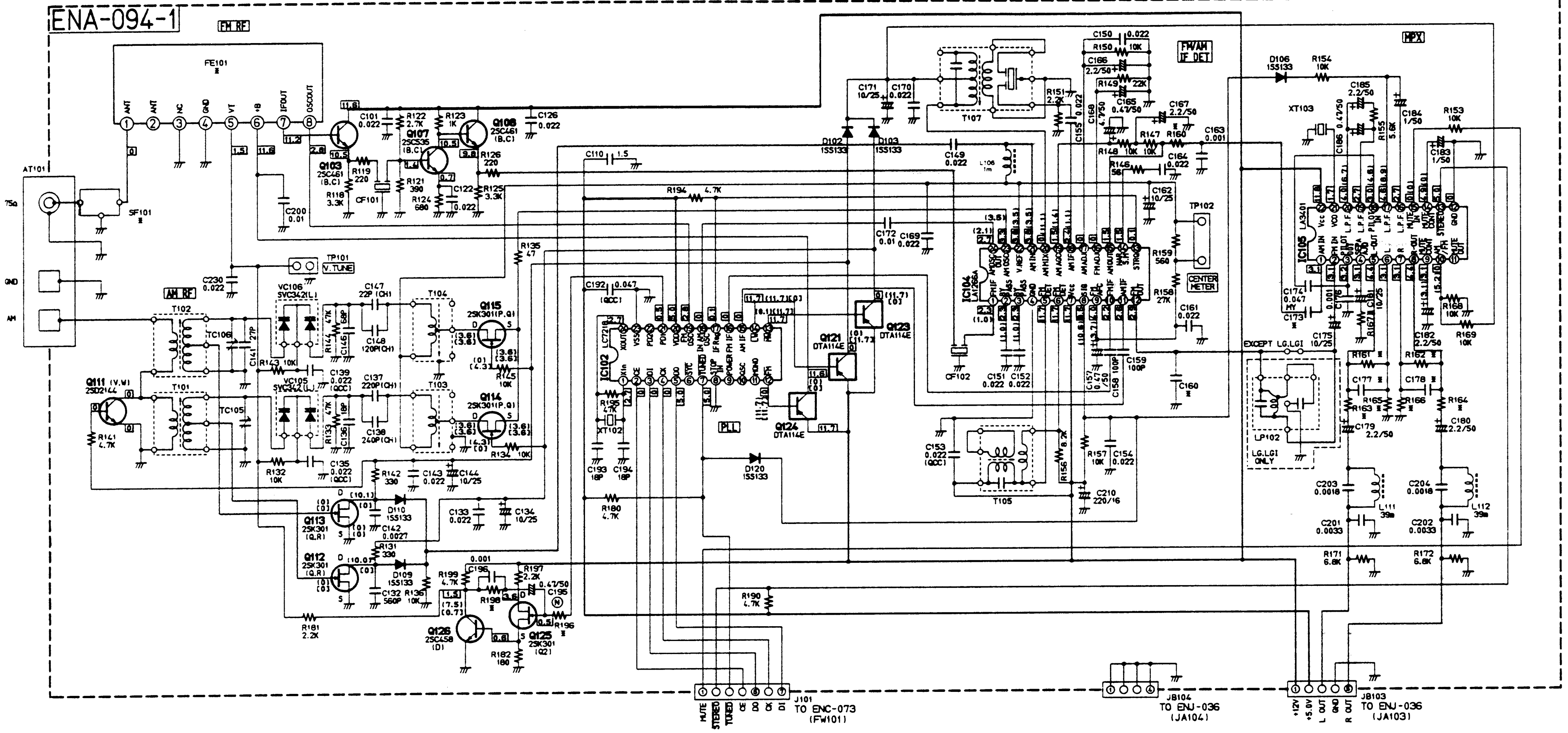
■ Cassette and AMP PC Board (ENJ-036)



(No. 20149)

■ Tuner Section (2)

FOR LEV.LG.LGI

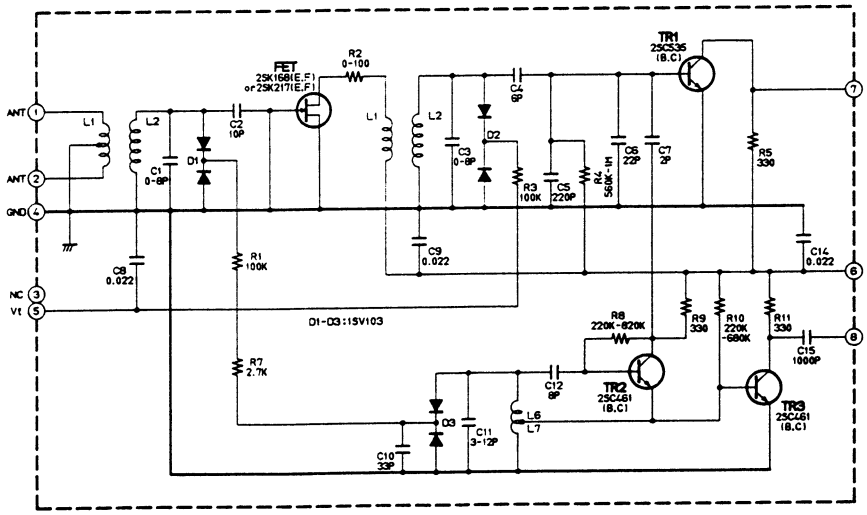

ENA-094-1
FM RF
FE101
ANT
ANT
NC
GND
VT
+B
IFOUT
OSCOUT
AT101
FM 75Ω
GND
AM
SF101
AM RF
T102
T101
Q111
TP101
V.TUNE
FM/AM IF DET
MPX
PLL
IC104
IC105
IC102
XT102
XT103
TP102
CENTER METER
EXCEPT LG.LGI
LP102
LG.LGI ONLY
T107
T105
T103
T104
J101
TO ENC-073
(FW101)
MUTE
STEREO
TUNED
CE
DI
DO
CL
JB104
TO ENJ-036
(JA104)
JB103
TO ENJ-036
(JA103)
+12V
+5.6V
L OUT
GND
R OUT

※ MARK

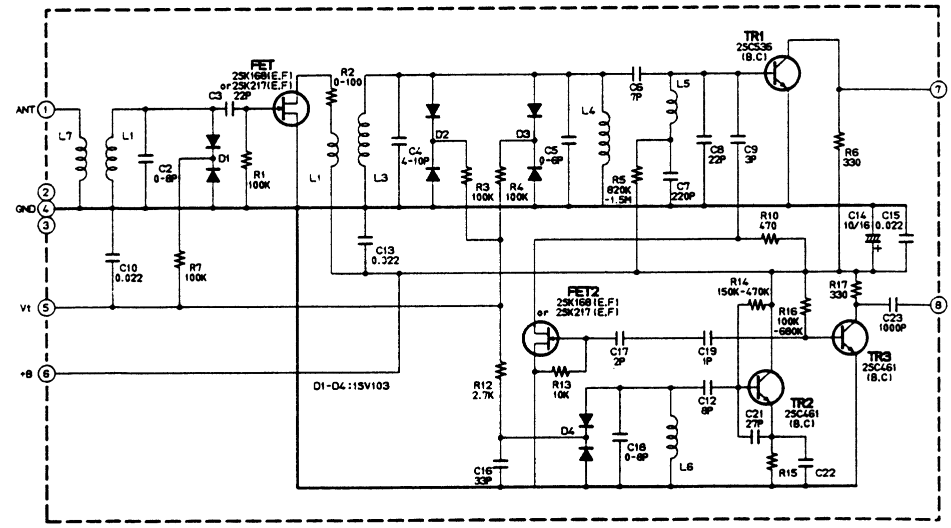
	LEV	LG.LGI
R160	18K	18K
R161.162	120K	120K
R163.164	3.9K	3.9K
R165.166	270K	270K
R167	47K	47K
R196	2.2K	2.2K
R198	8.2K	8.2K
C160	100P	220P
C173	0.022	0.022
C177.178	390P	390P
SF101	NONE	USED
FE101	ENF2203-001	EAF2203-002

▭ FM AUTO NO SIGNAL
( ) MW NO SIGNAL
[ ] LW NO SIGNAL

EAF2203-001


FET
2SK168(E,F)
or 2SK217(E,F)
TR1
2SC535
(B,C)
TR2
2SC461
(B,C)
TR3
2SC461
(B,C)
ANT
ANT
GND
NC
Vt
IF OUT
+B
OSC OUT
D1-D3:1SV103

EAF2203-002

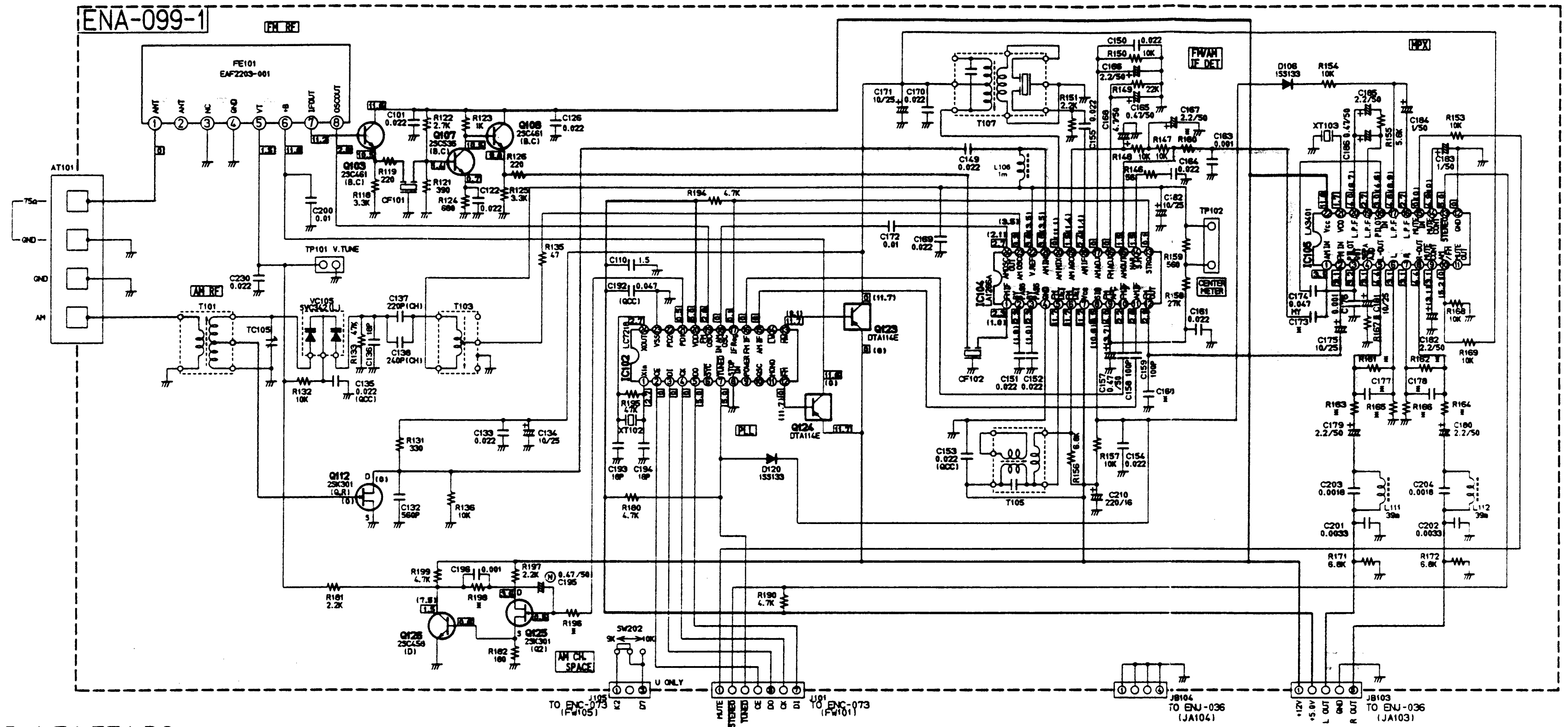

FET
2SK168(E,F)
or 2SK217(E,F)
FET2
2SK168(E,F)
or 2SK217(E,F)
TR1
2SC535
(B,C)
TR2
2SC461
(B,C)
TR3
2SC461
(B,C)
ANT
GND
Vt
+B
IF OUT
OSC OUT
D1-D4:1SV103

Notes:
1. ▭ Shows DC voltage to the chassis with no signal input.
2. ——— indicates +B power supply.
3. -------- indicates −B power supply.
4. indicates signal path.

5. When replacing the parts in the darkned are (■) and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
The design and contents are subject to change without notice.

■ Tuner Section (1)

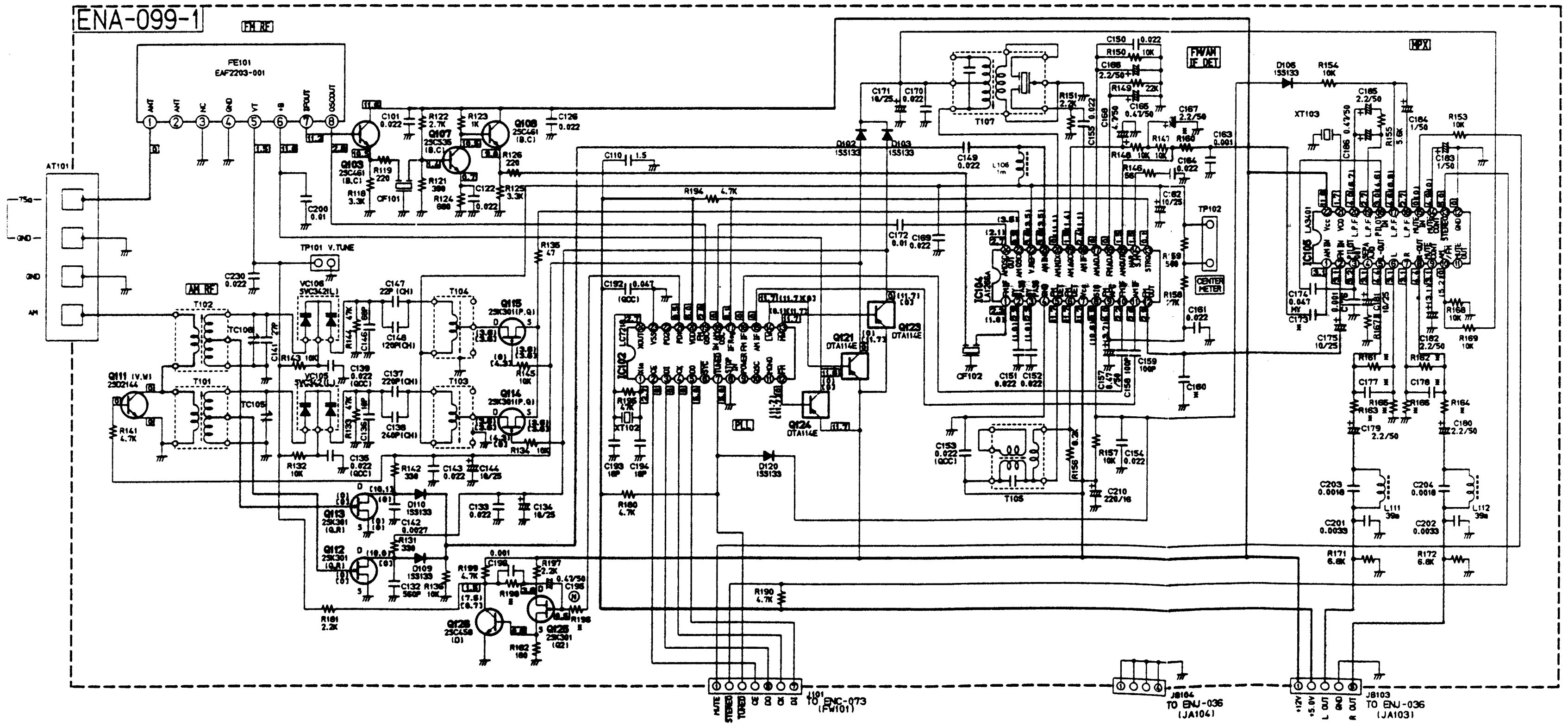
FOR A.U


ENA-099-1
FM RF
FE101
EAF2203-001
AT101
AM RF
FM/AM IF DET
MPX
CENTER METER
TP101 V.TUNE
TP102
PLL
AM CH. SPACE
SW202
U ONLY
J101 TO ENC-073 (FW101)
J102 TO ENC-073 (FW105)
JB104 TO ENJ-036 (JA104)
JB103 TO ENJ-036 (JA103)

※ MARK

	U	A	LE.LEF	LBS
R160	5.6K	18K	18K	8.2K
R161,162	82K	120K	120K	82K
R163,164	4.7K	3.9K	3.9K	3.9K
R165,166	180K	270K	270K	270K
R167	39K	47K	47K	47K
R196	10K	10K	2.2K	2.2K
R198	3.3K	3.3K	8.2K	8.2K
C160	220P	220P	100P	100P
C173	0.039	0.022	0.022	0.022
C177,178	820P	390P	390P	560P

FOR LE.LEF.LBS

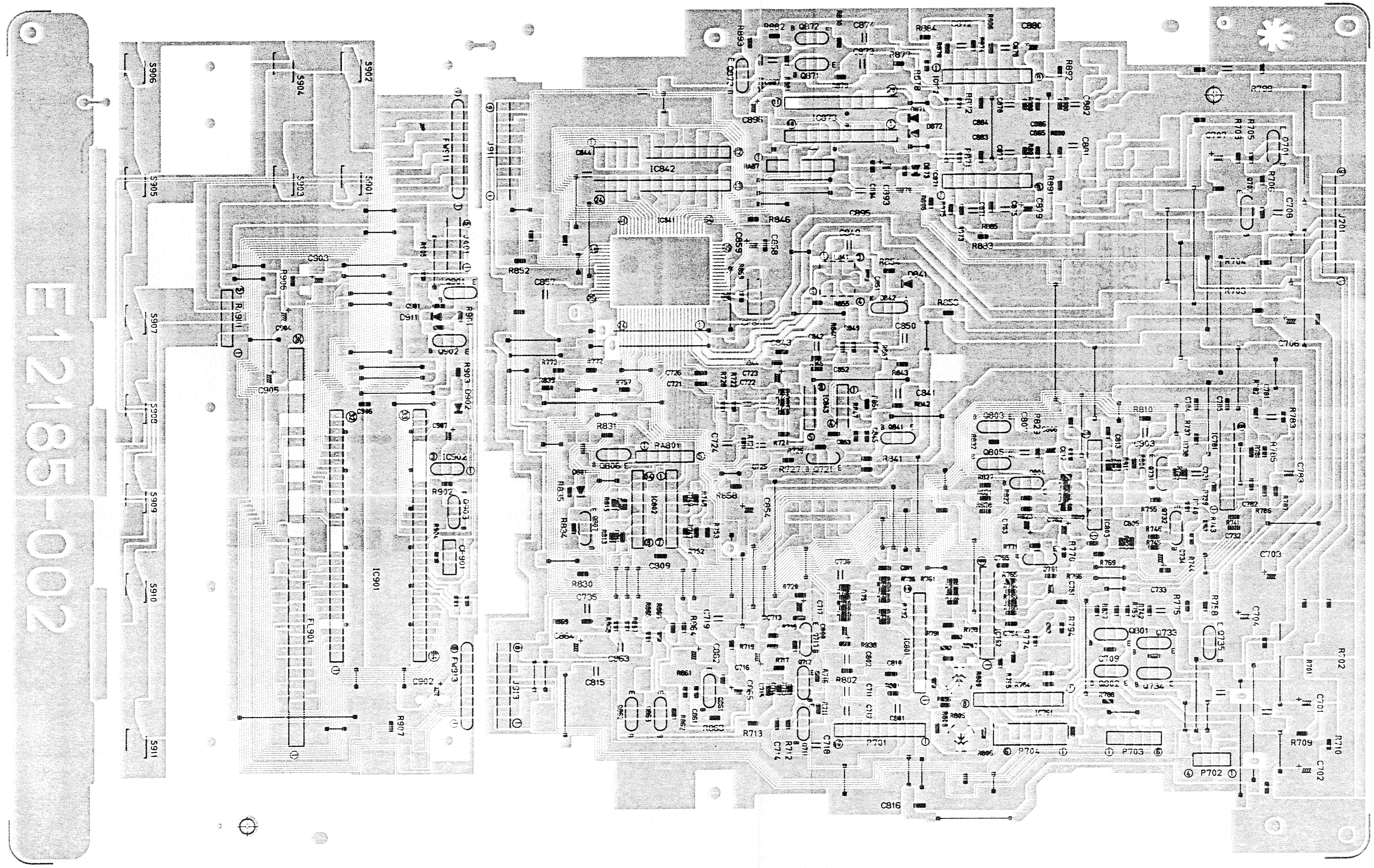

ENA-099-1
FM RF
FE101
EAF2203-001
AT101
AM RF
FM/AM IF DET
MPX
CENTER METER
TP101 V.TUNE
TP102
PLL
J101 TO ENC-073 (FW101)
JB104 TO ENJ-036 (JA104)
JB103 TO ENJ-036 (JA103)

▭ FM AUTO NO SIGNAL
( ) MW NO SIGNAL
[ ] LW NO SIGNAL

Notes:

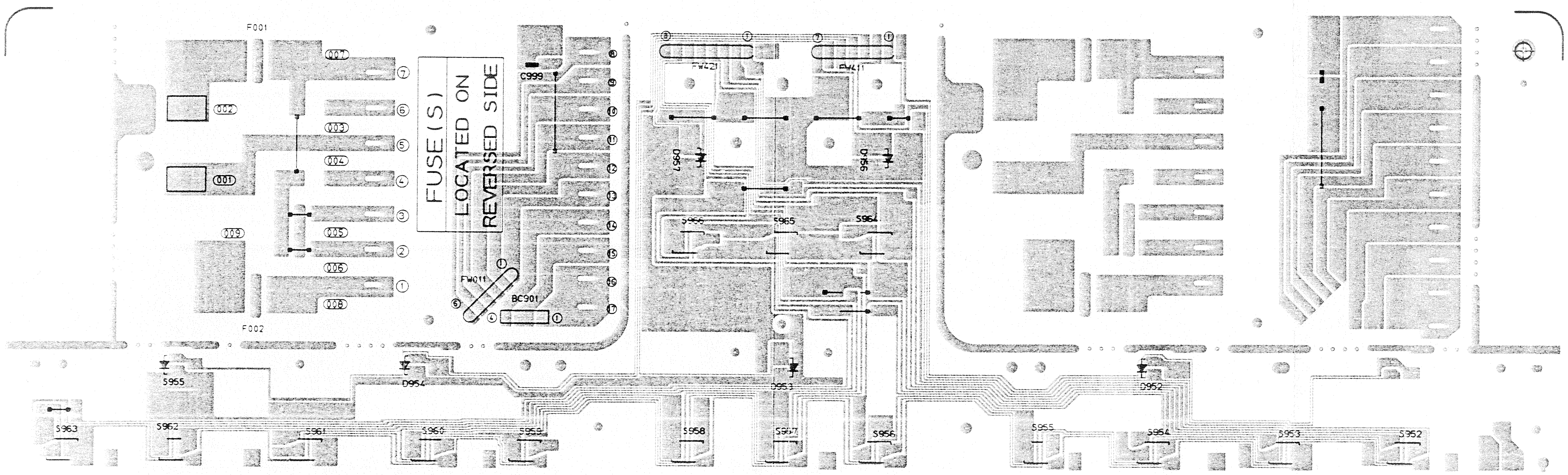
1. ▭ Shows DC voltage to the chassis with no signal input.
2. —— indicates +B power supply.
3. ------- indicates −B power supply.
4. indicates signal path.
5. When replacing the parts in the darkned are (▬) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

■ CD PC Board (ENN-217)


E12185-002
IC842
IC841
IC873
IC901
IC902
IC801
IC781
IC601
FL901
J201
J913
P701
P702
P703
P704
S901
S902
S903
S904
S905
S906
S907
S909
S910
S911

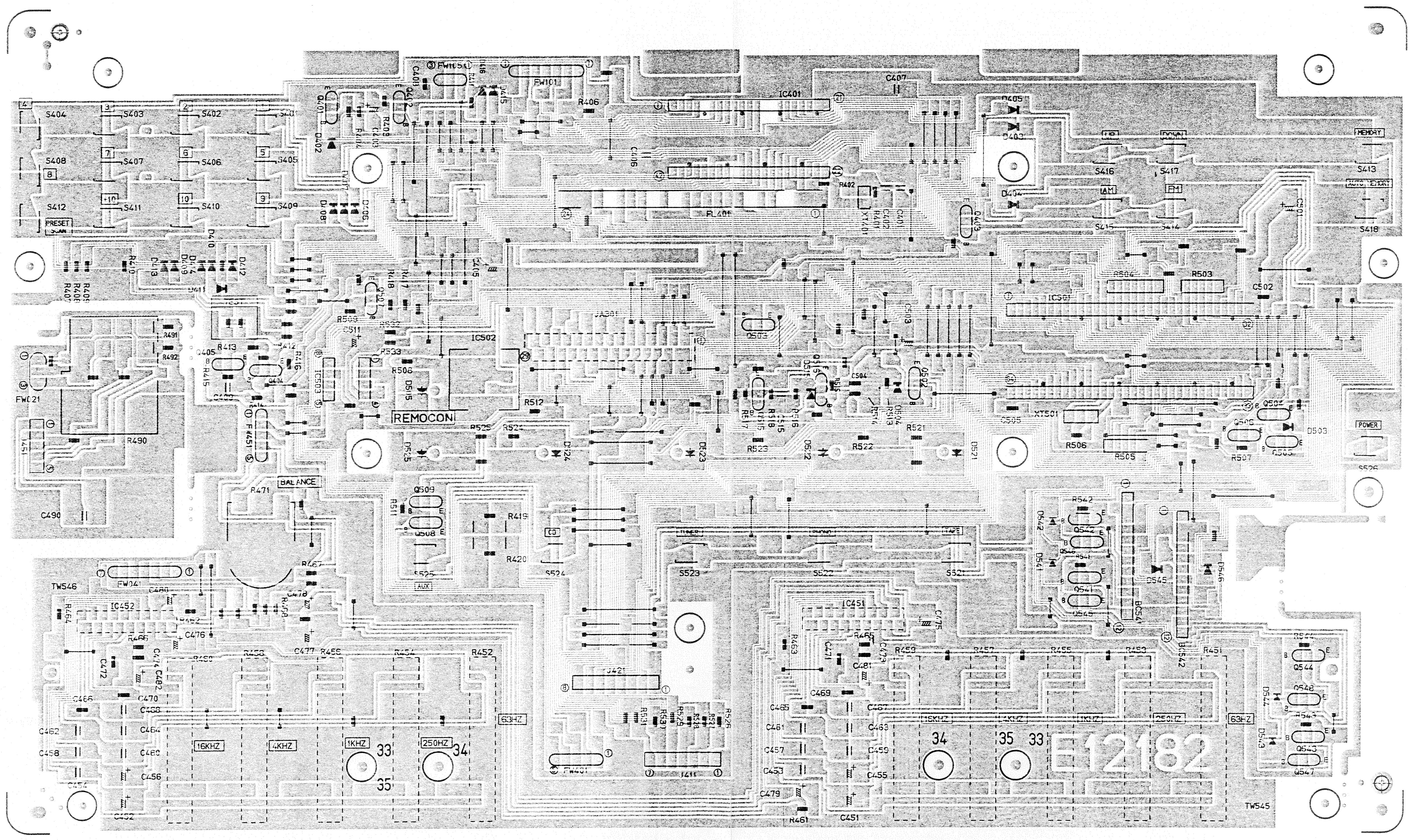
CA-E33BK
CA-E33LBK

■ Cassette SW and Power Primary PC Board (ENB-101)

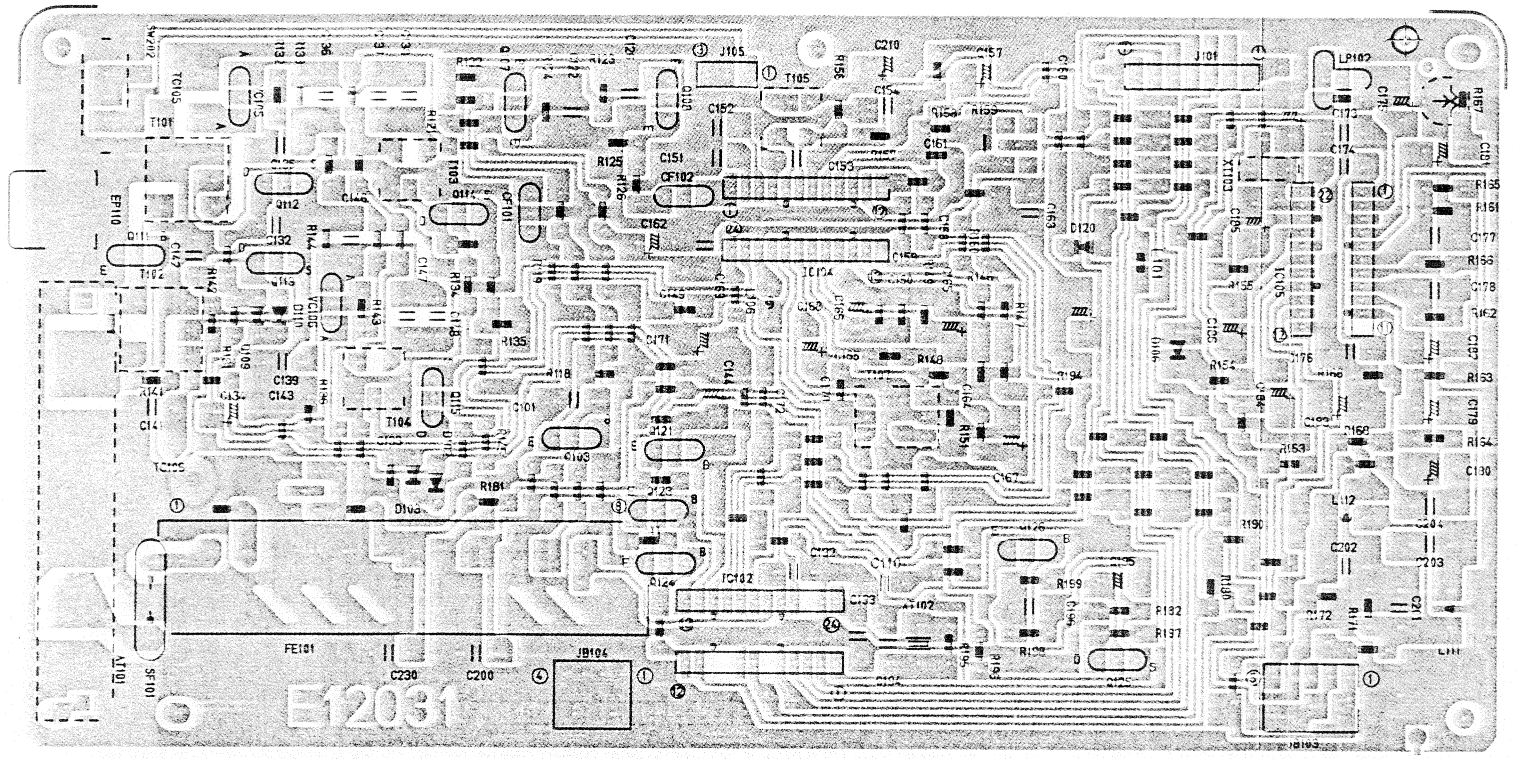

F001
001
002
003
004
005
006
008
009
001
F002
⑦
⑥
⑤
④
③
②
①
FUSE(S)
LOCATED ON
REVERSED SIDE
C999
FW011
BC901
FW421
FW411
D957
D956
S966
S965
S964
D955
D954
D953
D952
S963
S962
S961
S960
S959
S958
S957
S956
S955
S954
S953
S952

(No. 20149)

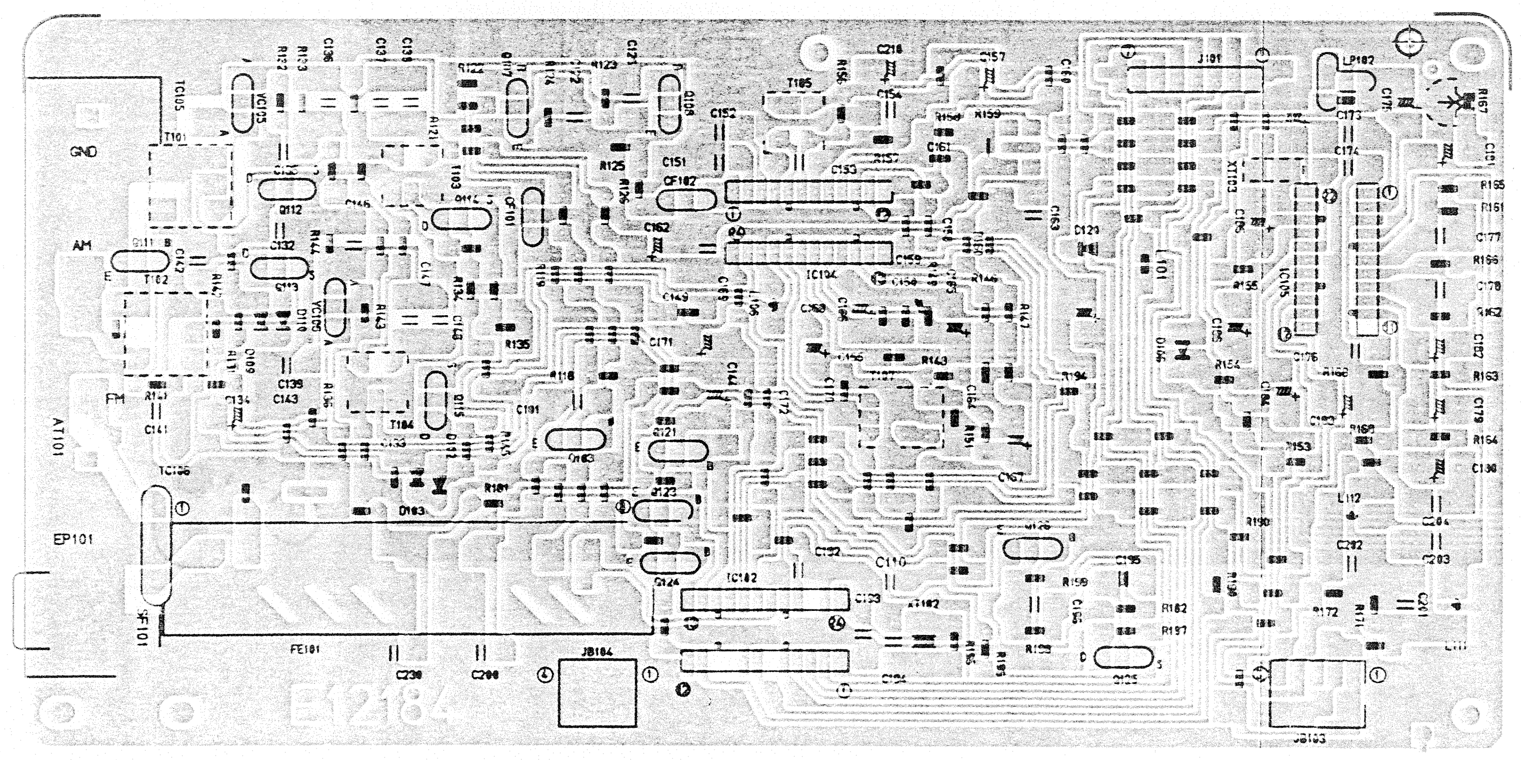
■ System Control and FL Display PC Board (ENC-073)


S404
S403
S402
S408
S407
S406
S405
S412
S411
S410
S409
PRESET
SCAN
FW105
FW101
IC401
C407
D405
D403
D404
UP
DOWN
MEMORY
S416
S417
S413
AM
FM
AUTO MEMORY
S415
S414
S418
FL401
XT401
R504
R503
C502
IC501
IC502
IC503
JA501
REMOCON
Q503
Q502
XT501
R506
R505
R507
D503
POWER
S526
FW021
R490
C490
BALANCE
R471
Q509
Q508
S525
AUX
R419
R420
CD
S524
TUNER
PHONO
TAPE
S523
S522
S521
R542
Q542
Q541
Q545
D545
D546
FW041
TW546
IC452
C476
C477
R452
16KHZ
4KHZ
1KHZ
250HZ
63HZ
33
34
35
FW401
IC451
C475
R451
Q544
Q546
Q543
Q547
TW545
E12182

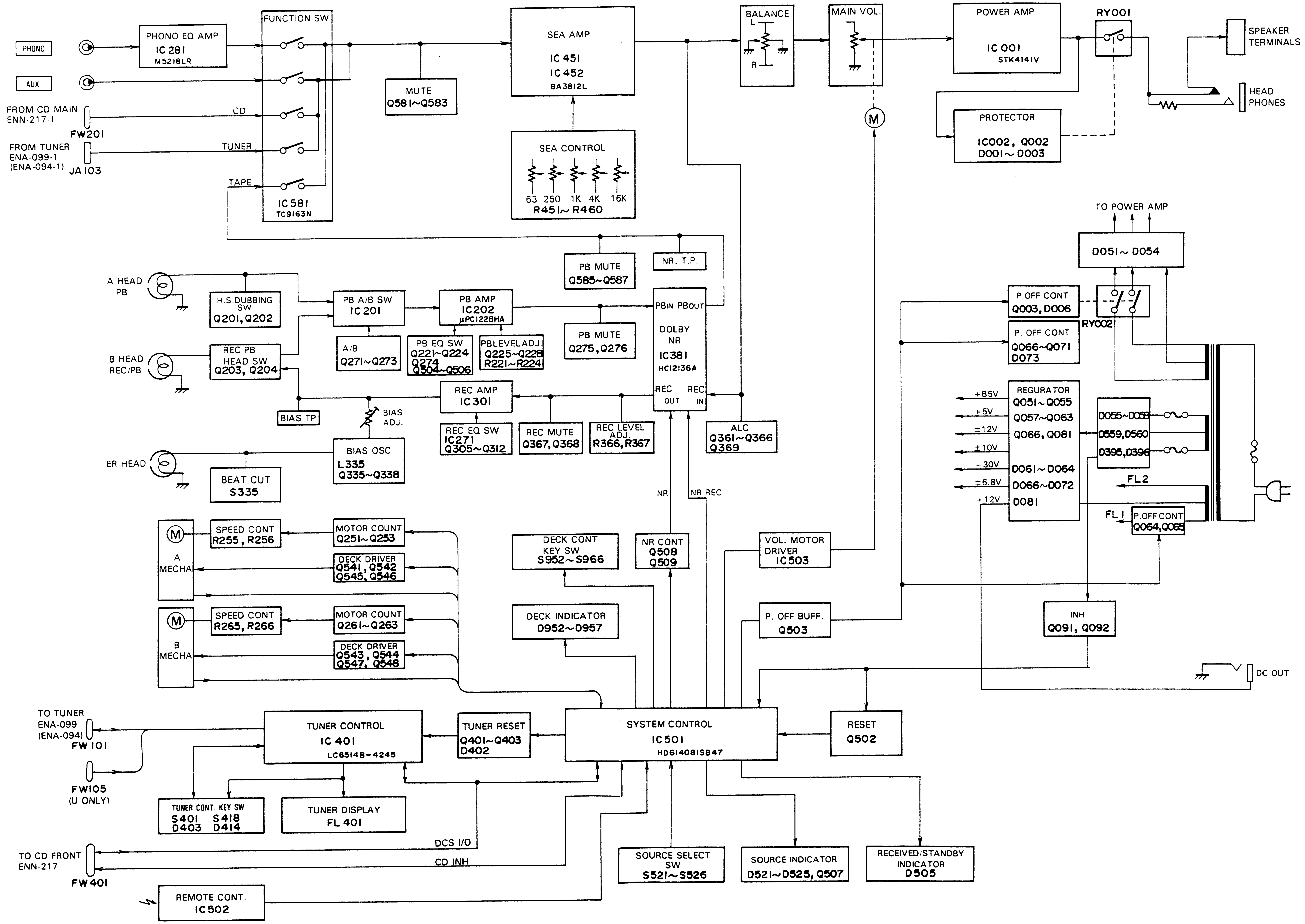
■ Tuner PC Board (ENA-099)


E12031
FE101
JB104
JB103
IC104
IC102
J101
LP102
EP110
AT101
SF101

(ENA-094)

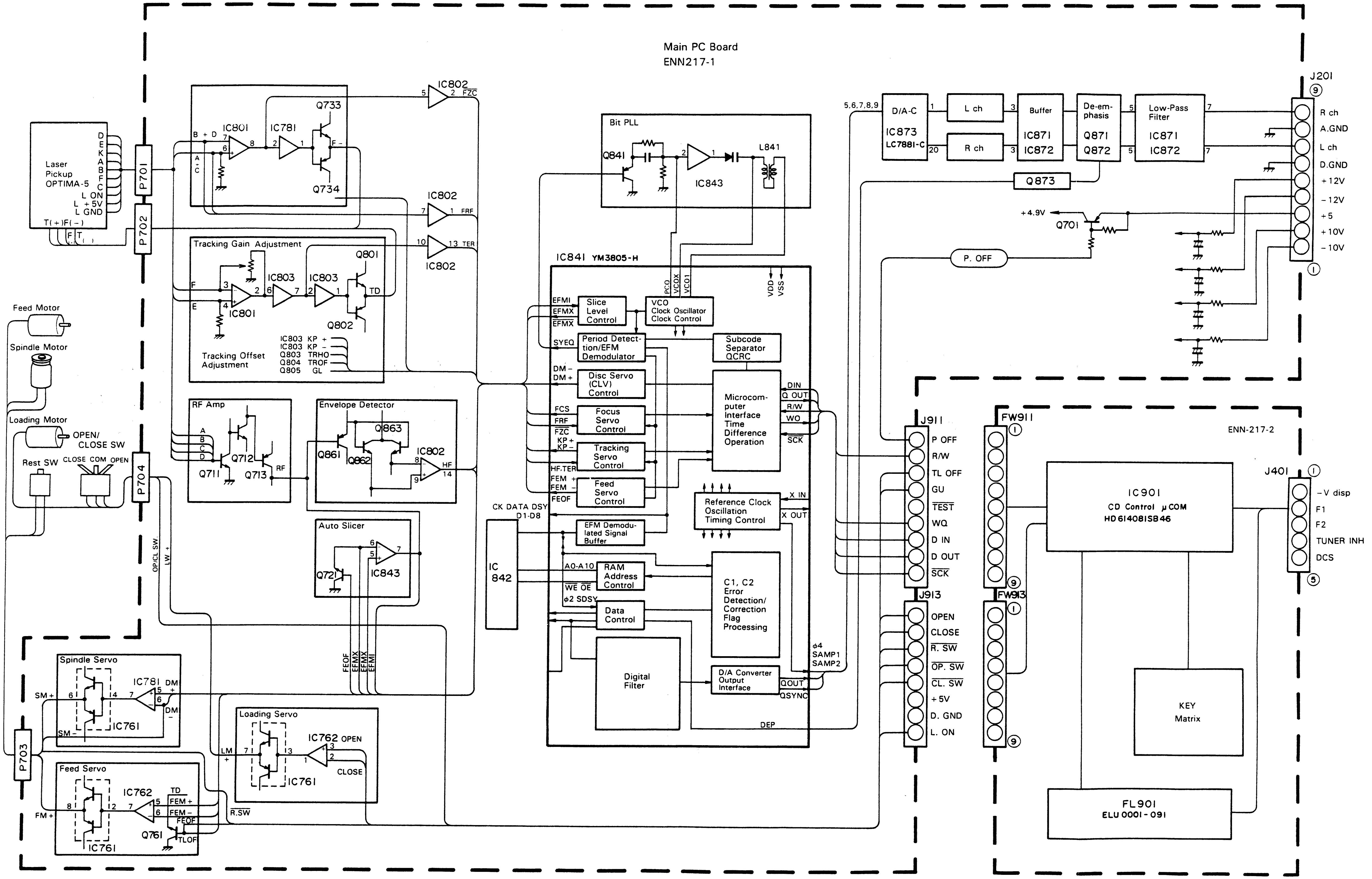

E12184
GND
AM
FM
AT101
EP101
FE101
JB104
JB103
IC104
IC102
J101
LP102
SF101

Block Diagram ■ System Control & Audio Section


PHONO
AUX
FROM CD MAIN
ENN-217-1
FW201
FROM TUNER
ENA-099-1
(ENA-094-1)
JA103
PHONO EQ AMP
IC281
M5218LR
FUNCTION SW
CD
TUNER
TAPE
IC581
TC9163N
MUTE
Q581~Q583
SEA AMP
IC451
IC452
BA3812L
SEA CONTROL
63 250 1K 4K 16K
R451~R460
BALANCE
L
R
MAIN VOL.
M
POWER AMP
IC001
STK4141V
RY001
SPEAKER TERMINALS
HEAD PHONES
PROTECTOR
IC002, Q002
D001~D003
TO POWER AMP
D051~D054
P.OFF CONT
Q003, D006
RY002
P. OFF CONT
Q066~Q071
D073
REGURATOR
Q051~Q055
Q057~Q063
Q066, Q081
D061~D064
D066~D072
D081
+B5V
+5V
±12V
±10V
-30V
±6.8V
+12V
D055~D058
D559, D560
D395, D396
FL2
FL1
P.OFF CONT
Q064, Q065
INH
Q091, Q092
DC OUT
PB MUTE
Q585~Q587
NR. T.P.
PB MUTE
Q275, Q276
PBIN PBOUT
DOLBY
NR
IC381
HC12136A
REC OUT
REC IN
ALC
Q361~Q366
Q369
A HEAD
PB
H.S.DUBBING SW
Q201, Q202
PB A/B SW
IC201
PB AMP
IC202
μPC1228HA
A/B
Q271~Q273
PB EQ SW
Q221~Q224
Q274
Q504~Q506
PBLEVELADJ.
Q225~Q228
R221~R224
B HEAD
REC/PB
REC.PB
HEAD SW
Q203, Q204
REC AMP
IC301
BIAS TP
BIAS ADJ.
REC EQ SW
IC271
Q305~Q312
REC MUTE
Q367, Q368
REC LEVEL ADJ.
R366, R367
ER HEAD
BEAT CUT
S335
BIAS OSC
L335
Q335~Q338
NR
NR REC
M
A
MECHA
SPEED CONT
R255, R256
MOTOR COUNT
Q251~Q253
DECK DRIVER
Q541, Q542
Q545, Q546
M
B
MECHA
SPEED CONT
R265, R266
MOTOR COUNT
Q261~Q263
DECK DRIVER
Q543, Q544
Q547, Q548
DECK CONT
KEY SW
S952~S966
NR CONT
Q508
Q509
VOL. MOTOR
DRIVER
IC503
DECK INDICATOR
D952~D957
P. OFF BUFF.
Q503
TO TUNER
ENA-099
(ENA-094)
FW101
FW105
(U ONLY)
TUNER CONTROL
IC401
LC65148-4245
TUNER RESET
Q401~Q403
D402
SYSTEM CONTROL
IC501
HD614081SB47
RESET
Q502
TUNER CONT. KEY SW
S401 S418
D403 D414
TUNER DISPLAY
FL401
DCS I/O
CD INH
TO CD FRONT
ENN-217
FW401
REMOTE CONT.
IC502
SOURCE SELECT
SW
S521~S526
SOURCE INDICATOR
D521~D525, Q507
RECEIVED/STANDBY
INDICATOR
D505

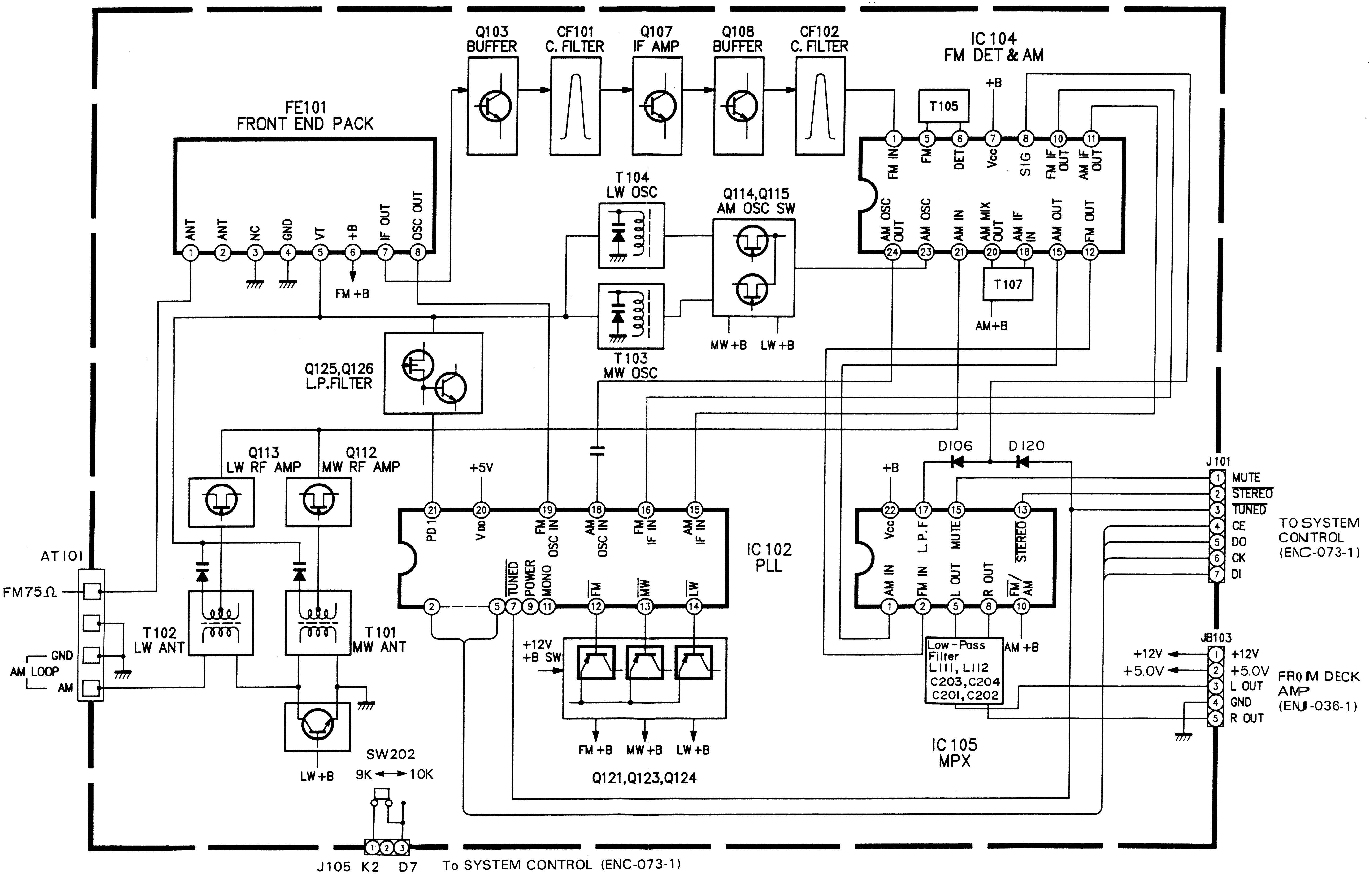
CA-E33BK
CA-E33LBK

■ CD Section

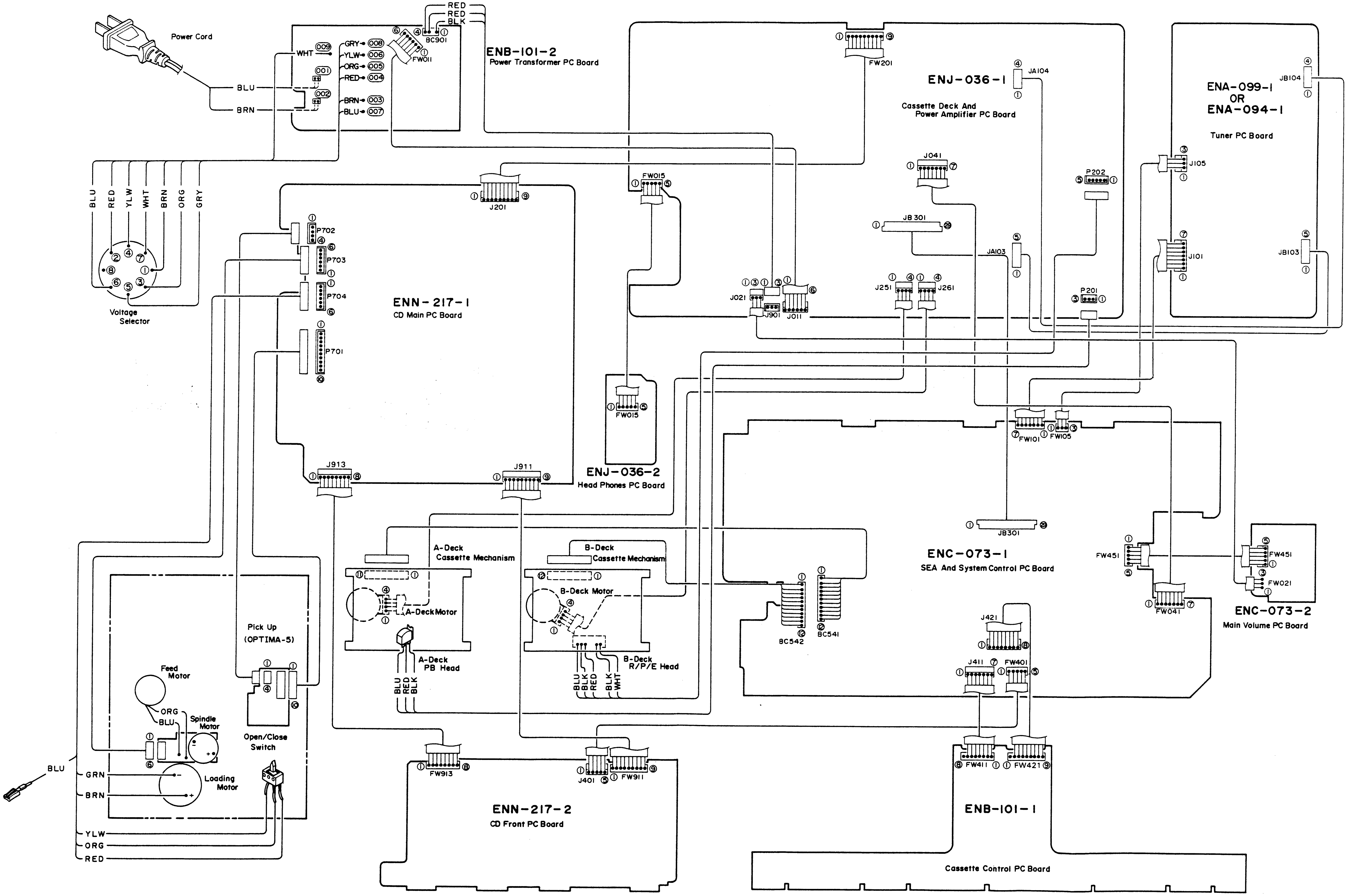

Main PC Board
ENN217-1
Laser Pickup OPTIMA-5
D
E
K
A
B
F
C
L ON
L +5V
L GND
T(+)F(−)
P701
P702
P703
P704
IC801
IC781
Q733
Q734
B + D
A + C
IC802
FZC
FRF
TER
Tracking Gain Adjustment
IC803
Q801
Q802
TD
Tracking Offset Adjustment
IC803 KP +
IC803 KP −
Q803 TRHO
Q804 TROF
Q805 GL
Feed Motor
Spindle Motor
Loading Motor
OPEN/CLOSE SW
Rest SW
CLOSE COM OPEN
RF Amp
Q711
Q712
Q713
RF
Envelope Detector
Q861
Q862
Q863
HF
Auto Slicer
Q721
IC843
OP/CL SW
LW +
Bit PLL
Q841
IC843
L841
IC841 YM3805-H
PCO
VCOX
VCO1
VDD
VSS
EFMI
EFMX
EFMX
Slice Level Control
VCO Clock Oscillator Clock Control
SYEQ
Period Detection/EFM Demodulator
Subcode Separator QCRC
DM −
DM +
Disc Servo (CLV) Control
FCS
FRF
FZC
Focus Servo Control
KP +
KP −
HF.TER
Tracking Servo Control
FEM +
FEM −
FEOF
Feed Servo Control
Microcomputer Interface Time Difference Operation
DIN
Q OUT
R/W
WO
SCK
Reference Clock Oscillation Timing Control
X IN
X OUT
CK DATA DSY
D1-D8
IC 842
EFM Demodulated Signal Buffer
A0-A10
WE OE
φ2 SDSY
RAM Address Control
Data Control
C1, C2 Error Detection/Correction Flag Processing
Digital Filter
D/A Converter Output Interface
φ4
SAMP1
SAMP2
QOUT
QSYNC
DEP
FEOF
EFMX
EFMX
EFMI
Spindle Servo
IC781
IC761
SM +
SM −
DMI
Loading Servo
IC762 OPEN
IC761
CLOSE
LM
Feed Servo
IC762
IC761
FM +
TD
FEM +
FEM −
FEOF
Q761
TLOF
R.SW
5.6.7.8.9
D/A-C
IC873
LC7881-C
L ch
R ch
Buffer
IC871
IC872
De-emphasis
Q871
Q872
Low-Pass Filter
IC871
IC872
Q873
+4.9V
Q701
P. OFF
J201
R ch
A.GND
L ch
D.GND
+12V
−12V
+5
+10V
−10V
J911
P OFF
R/W
TL OFF
GU
TEST
WQ
D IN
D OUT
SCK
J913
OPEN
CLOSE
R. SW
OP. SW
CL. SW
+5V
D. GND
L. ON
FW911
FW913
ENN-217-2
IC901
CD Control μCOM
HD6140815846
J401
−V disp
F1
F2
TUNER INH
DCS
KEY Matrix
FL901
ELU 0001-091

(No. 20149)

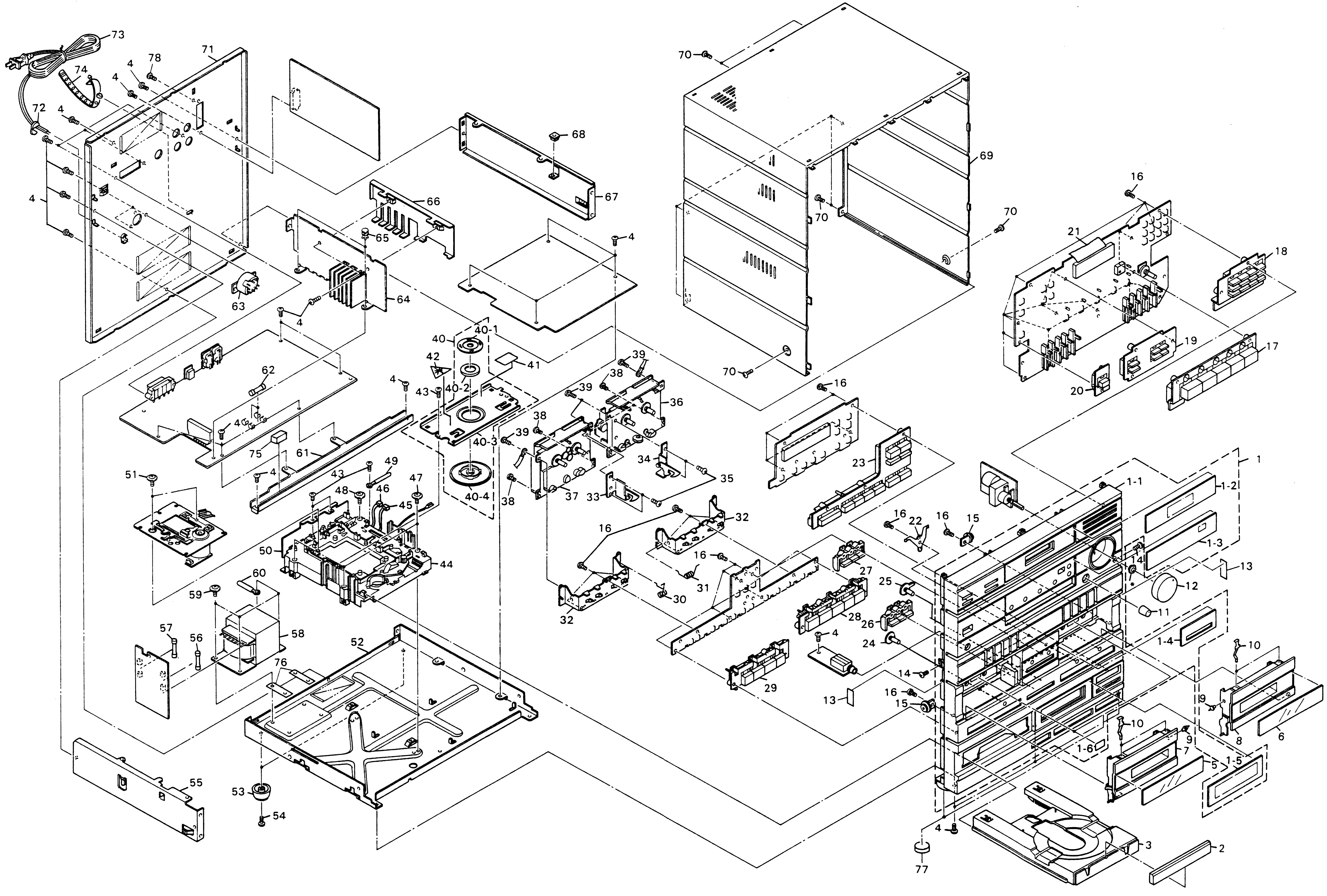
Tuner Section


FE101
FRONT END PACK
ANT
ANT
NC
GND
VT
+B
IF OUT
OSC OUT
FM +B
Q103
BUFFER
CF101
C. FILTER
Q107
IF AMP
Q108
BUFFER
CF102
C. FILTER
IC 104
FM DET & AM
T105
+B
FM IN
FM
DET
Vcc
SIG
FM IF OUT
AM IF OUT
AM OSC OUT
AM OSC
AM IN
AM MIX OUT
AM IF IN
AM OUT
FM OUT
T107
AM+B
T104
LW OSC
Q114,Q115
AM OSC SW
T103
MW OSC
MW +B
LW +B
Q125,Q126
L.P.FILTER
Q113
LW RF AMP
Q112
MW RF AMP
+5V
PD1
VDD
FM OSC IN
AM OSC IN
FM IF IN
AM IF IN
IC 102
PLL
TUNED
POWER
MONO
FM
MW
LW
+12V
+B SW
FM +B
MW +B
LW +B
Q121,Q123,Q124
AT101
FM75Ω
GND
AM LOOP
AM
T102
LW ANT
T101
MW ANT
LW +B
SW202
9K ←→ 10K
J105
K2
D7
To SYSTEM CONTROL (ENC-073-1)
D106
D120
+B
Vcc
L. P. F
MUTE
STEREO
AM IN
FM IN
L OUT
R OUT
FM/AM
AM +B
Low-Pass Filter
L111, L112
C203, C204
C201, C202
IC 105
MPX
J101
MUTE
STEREO
TUNED
CE
DO
CK
DI
TO SYSTEM CONTROL
(ENC-073-1)
JB103
+12V
+12V
+5.0V
+5.0V
L OUT
GND
R OUT
FROM DECK AMP
(ENJ-036-1)

Connection Diagram


Power Cord
BLU
BRN
WHT
RED
RED
BLK
GRY
YLW
ORG
RED
BRN
BLU
009
008
006
005
004
001
002
003
007
BC901
FW011
ENB-101-2
Power Transformer PC Board
BLU RED YLW WHT BRN ORG GRY
Voltage Selector
FW201
ENJ-036-1
Cassette Deck And Power Amplifier PC Board
JA104
JB104
ENA-099-1 OR ENA-094-1
Tuner PC Board
J105
J101
JB103
J041
P202
JB301
JA103
J251
J261
P201
J021
J901
J011
FW015
J201
P702
P703
P704
P701
ENN-217-1
CD Main PC Board
J913
J911
FW015
ENJ-036-2
Head Phones PC Board
FW101
FW105
JB301
ENC-073-1
SEA And System Control PC Board
FW451
FW451
FW021
FW041
ENC-073-2
Main Volume PC Board
A-Deck Cassette Mechanism
A-Deck Motor
A-Deck PB Head
BLU RED BLK
B-Deck Cassette Mechanism
B-Deck Motor
B-Deck R/P/E Head
BLU BLK RED BLK WHT
BC542
BC541
J421
J411
FW401
Pick Up (OPTIMA-5)
Feed Motor
ORG
BLU
Spindle Motor
Open/Close Switch
Loading Motor
BLU
GRN
BRN
YLW
ORG
RED
FW913
J401
FW911
ENN-217-2
CD Front PC Board
FW411
FW421
ENB-101-1
Cassette Control PC Board

General Exploded View and Parts List


73
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4
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72
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64
63
4
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40-1
42
41
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17
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40-2
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36
20
16
38
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40-3
34
35
23
1
75
61
51
43
49
47
48
46
45
40-4
37
33
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16
22
16
15
1-1
1-2
32
50
44
16
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1-3
14
13
60
59
31
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25
26
32
28
12
11
57
56
58
4
24
1-4
10
52
76
14
29
16
13
15
9
10
9
8
6
1-6
7
1-5
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4
3
2
77

PARTS LIST

Contents

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Cassette Mechanism Ass'y and Parts List 2-7

CD Mechanism Ass'y and Parts List 2-13

Printed Circuit Board Ass'y and Parts List 2-15

- ■ ENJ-036 ☐ Cassette and Power Amplifier PC Board Ass'y 2-15
- ■ ENN-217 ☐ CD PC Board Ass'y 2-20
- ■ ENA-099 ☐ Tuner PC Board Ass'y 2-23
- ■ ENC-073 ☐ System Control and FL Display PC Board Ass'y 2-26
- ■ ENA-094 ☐ Tuner PC Board Ass'y 2-29
- ■ ENB-101 ☐ Cassette Switch and Power Primary PC Board Ass'y 2-31

Accessories List 2-32

Packing Materials and Part Numbers 2-33

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	47	E73265-003	Special Screw	3		
	48	E74727-006	Special Screw	1		
	49	E72018-004	Wier Clamp	1		
	50	E75277-001	Shield Plate	1		
	51	E74948-001	Special Screw	2		
	52	E12210-001	Chassis Base	1		
	53	E47227-028	Foot	2		
	54	SBSG3010Z	Screw	2		
	55	E306634-001	Side Bracket	1	Left	
⚠	56	QMF51E2-2R0J1	Fuse	1	F001	U
⚠		QMF51E2-1R0J1	Fuse	1	F001	Except U , LBS
⚠		QMF51E2-1R0J1BS	Fuse	1	F001	LBS
⚠	57	QMF51E2-1R0J1	Fuse	1	F002	
⚠	58	ETP1050-22FA	Power Transformer	1		U
⚠		ETP1050-22EA	Power Transformer	1		Except U , LBS
⚠		ETP1050-22EABS	Power Transformer	1		LBS
	59	E65389-002	Special Screw	4		
	60	E72018-003	Wire Clamp	1		
	61	E306281-001	Circuit Board Bracket	1		
⚠	62	QMF51E2-1R25J1	Fuse	2	F051 , F052	Except LBS
⚠		QMF51E2-1R2J1BS	Fuse	2	F051 , F052	LBS
⚠	63	QSR0085-018	Votage Selector	1		U
	64	E306633-001	Heat Sink	1		
	65	E48729-010	Plastic Rivet	2		
	66	E306705-001	Leaf Spring	1		
	67	E306635-001	Side Bracket	1	Right	
	68	E306764-001	Fastener	1		
	69	E26643-001	Metal Cover	1		
	70	SDSG3008M	Screw	8		
	71	E12208-006	Rear Panel	1		U
		E12208-007	Rear Panel	1		A
		E12208-008	Rear Panel	1		LE , LEF
		E12208-009	Rear Panel	1		LBS
		E12208-010	Rear Panel	1		LG , LEV , LGI
	—	E306019-064	Rating Label	1	Made in Malaysia	U
	—	E306019-065	Rating Label	1	Made in Malaysia	LEV , LGI
⚠	72	QHS3876-162	Cord Stopper	1		Except LBS
⚠		QHS3876-162BS	Cord Stopper	1		LBS
⚠	73	QMP2560-244	Power Cord	1		A
⚠		QMP7520-200	Power Cord	1		U
⚠		QMP3900-200	Power Cord	1		Except A , U , LBS
⚠		QMP9017-008BS	Power Cord	1		LBS
	74	E304880-001	Cord Holder	1		
	75	E3400-452	Felt Spacer	1		
	76	E75928-001	Spacer	2		
	77	E75132-002	Felt Spacer	2		
	78	SBST3006N	Screw	1		
	—	E70891-001	Classe 1 Label	1		
	—	E60965-001BS	Warning Label	1		LBS
	—	E70027-001	Aproval Label	1		LE
	—	QZL1031-101	SEV Label	1		LEV
	—	E61029-005	Number Label	1		

⚠: Safety parts

The Marks Designated Areas

A··················Australia
U··················Other Countries
LG··················West Germany (with LW)
LBS··················the U.K. (with LW)
LE , LEF··················Continental Europe
LEV··················Switzerland (with LW)
LGI··················Italy (with LW)
No mark indicates all areas.

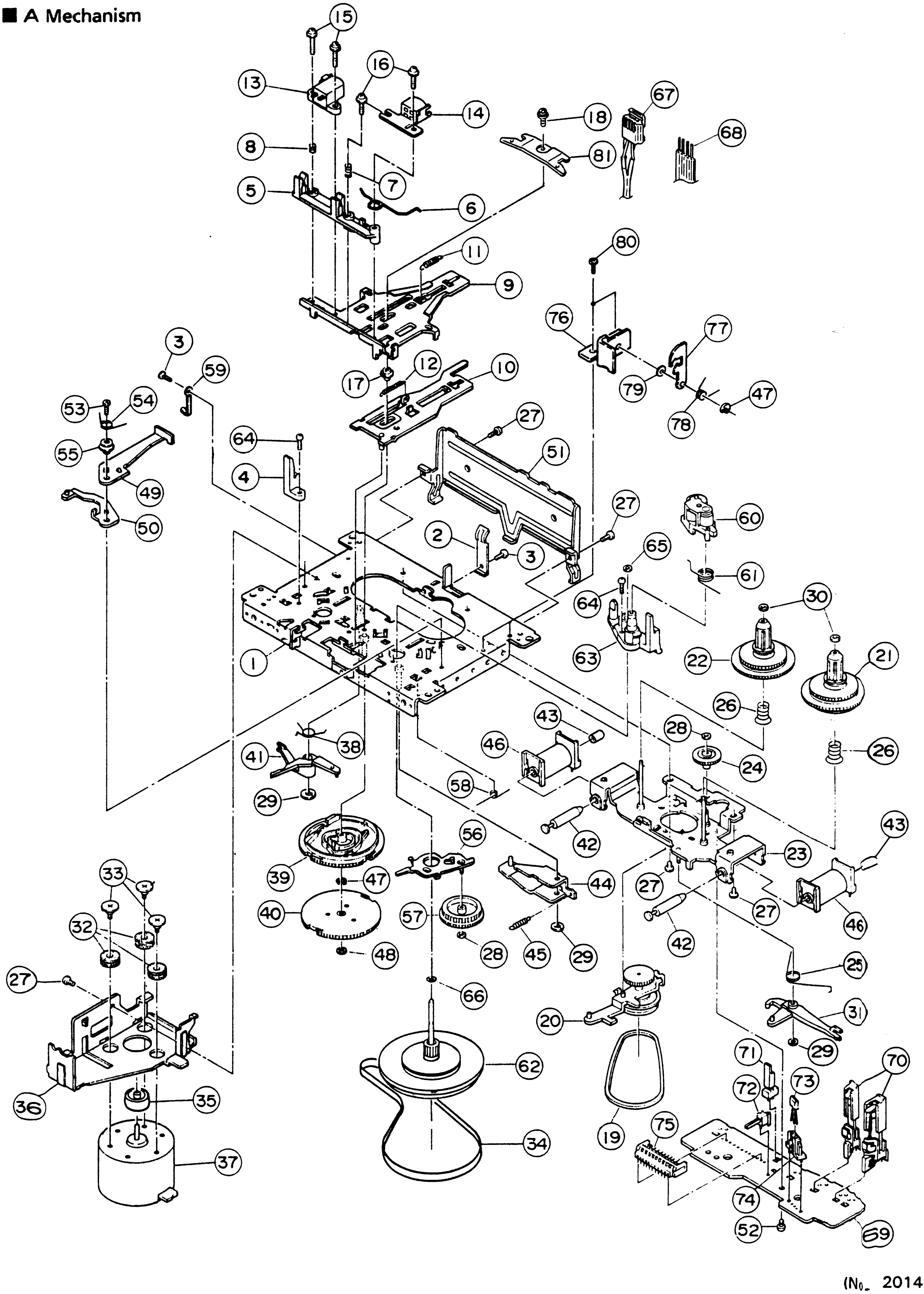
■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-CAE33BKU(S)	Front Panel Ass'y	1		U , A
		EFP-CAE33LBKE(S	Front Panel Ass'y	1		Except U , A
	1-1	E12211-001	Front Panel	1		U , A
		E12211-002	Front Panel	1		Except U , A
	1-2	E306637-001	Tuner Window	1		
	1-3	E306639-001	Amp Window	1		
	1-4	E306645-001	Ornament	1		
	1-5	E306647-001	CD Window	1		
	1-6	E69777-003	Reaf Plate	2		
	2	E306650-001	Fitting	1		
	3	E12048-005	Tray	1		
	4	SBSG3008N	Screw	25		LEV , LG , LGI
		SBSG3008N	Screw	24		A , LE , LEF , LBS
		SBSG3008N	Screw	27		U
	5	E306641-001	Cassette Window	1	A	
	6	E306643-001	Cassette Window	1	B	
	7	E26644-001	Cassette Holder	1	A	
	8	E26646-001	Cassette Holder	1	B	
	9	E75600-001	Shaft	2		
	10	VKY4180-001	Holder Spring	4		
	11	E74873-002	Knob	1		
	12	E306649-001	Volume Knob	1		
	13	EXO030008H05S	Felt Spacer	2		LBS
	14	GBSG3008Z	Screw	2		
	15	E305654-003	Damper Ass'y	2		
	16	SDSF2608Z	Screw	34		
	17	E26650-001	Push Button	1	Source	
	18	E26649-001	Push Button	1	Preset	
	19	E26648-001	Push Button	1	Up /Down	
	20	E306652-001	Push Button	1	Power	
	21	EWR1VG-25TT	FFC Cable	1		
	22	E305914-001	Leaf Spring	2		
	23	E26652-001	Push Button	1		
	24	E75821-001	Indicator	3	Play	
	25	E75822-001	Indicator	1	Rec	
	26	E306654-001	Push Button	1	Rec	
	27	E306654-002	Push Button	1	Dolby	
	28	E306657-001	Push Button	1	Cassette (B)	
	29	E306655-001	Push Button	1	Cassette (A)	
	30	E75906-001	Holder Spring	1	A	
	31	E75907-001	Holder Spring	1	B	
	32	E306636-001	Holder Bracket	2		
	33	E75396-001	Lock Cam	1	A	
	34	E75397-001	Lock Cam	1	B	
	35	SSST2606Z	Screw	4		
	36	————	Cassette Mechanism Ass'y	1		
	37	————	Cassette Mechanism Ass'y	1		
	38	SBST3006C	Screw	4		
	39	SDSF2608C	Screw	4		
	40	E305598-009	CD Clamper	1		
	40-1	E74898-003	Yoke	1		
	40-2	E74897-002	Magnet	1		
	40-3	E305594-002	Clamper Base	1		
	40-4	E305595-004	Clamper	1		
	41	E303875-004	Caution Label	1		
	42	E71541-001	Eilaser Mark	1		LE , LEF
	43	SBSF3008Z	Screw	4		
	44	————	CD Mechanism Ass'y	1		
	45	EWS25A-B104	Socket Wire Ass'y	1	10 Pin	
	46	EWS254-B104	Socket Wire Ass'y	1	4 Pin	

⚠: Safety parts

Cassette Mechanism Ass'y and Parts List

■ A Mechanism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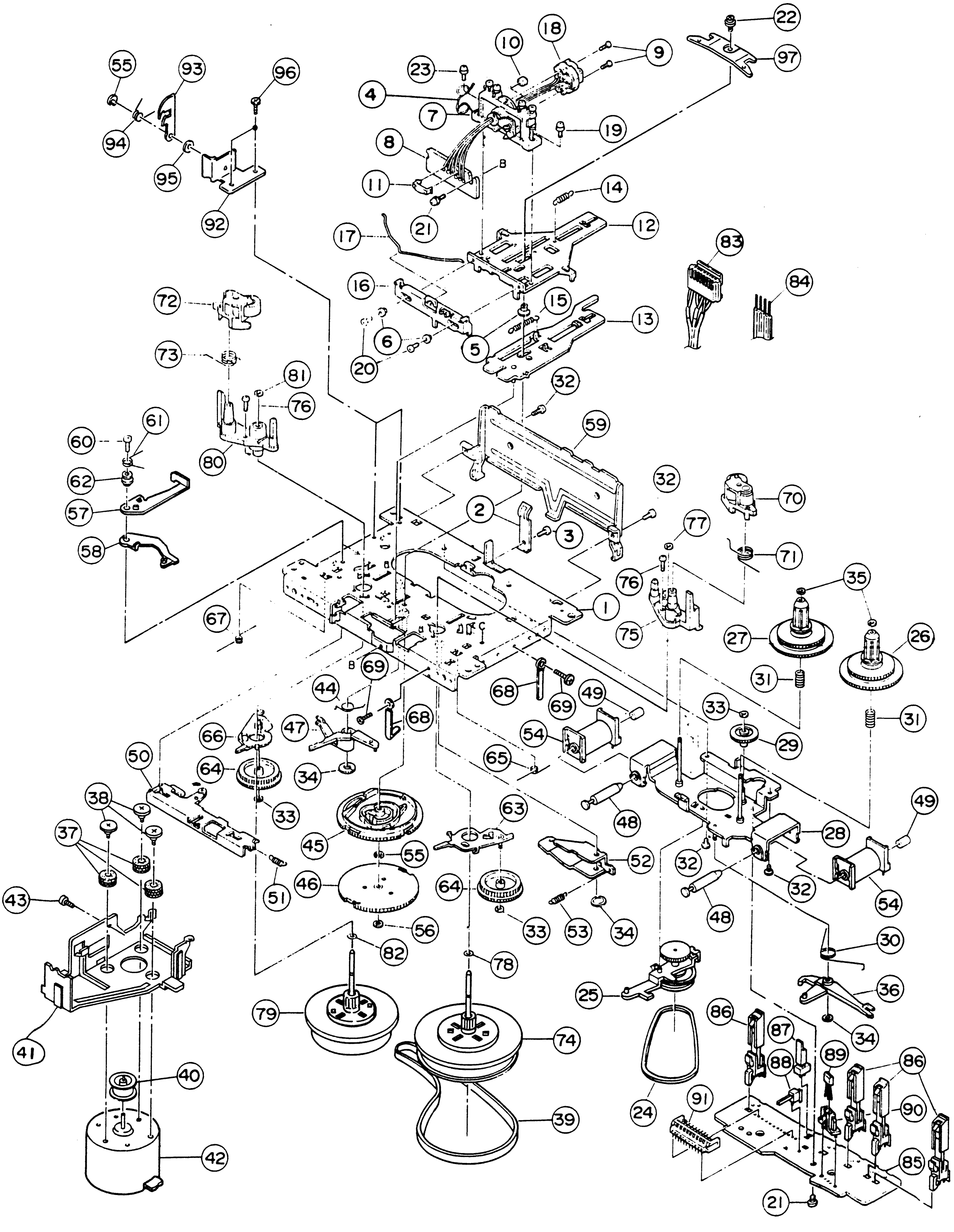
■ A Mechanism Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	188001503T	Chassis Ass'y	1		
2	18800102T	Pack Spring	1		
3	SPST2003Z	Screw	2		
4	18800107T	Tape Guide	1		
5	18800208T	Head Base	1		
6	18800406T	Pinch Roller Spring	1		
7	18210307T	Azimuth Spring	1		
8	18210308T	EH. Spring	1		
9	18800207T	Head Panel (A)	1		
10	188002501T	Head Panel (B) Ass'y	1		
11	18800204T	RC. Spring	1		
12	18800205T	Panel Spring	1		
13	62011303T	Head	1		
14	MS15R-AA2N1	Head	1		
15	92210000T	Screw	2		
16	92250000T	Screw	2		
17	18800219T	Panel Collar (A)	1		
18	99991816T	Screw	1		
19	18800708T	RF. Belt	1		
20	188007304T	RF. Clutch Ass'y	1		
21	188005301T	T. Reel Ass'y (F)	1		
22	188005302T	T. Reel Ass'y (R)	1		
23	188005501T	Reel Base Ass'y	1		
24	18800508T	FF Gear	1		
25	18800517T	FR. Trigger Arm Spring	1		
26	18800522T	B.T. Spring (R)	2		
27	SPST2004Z	Screw	5		
28	94210000T	P. Washer Cut	2		
29	99997004T	HL. Washer Cut	3		
30	99997003T	HL. Washer Cut	2		
31	18800515T	RF. Trigger Arm	1		
32	18211266T	Motor Rubber	3		
33	18511418T	Motor Collar Screw	3		
34	18800944T	Main Belt	1		
35	18800937T	Motor Pulley	1		
36	18800911T	Motor Bracket	1		
37	60050342T	Motor	1		
38	18800106T	M. Trigger Arm Spring	1		
39	18802115T	M. Gear	1		
40	18802116T	RF. Cam Gear	1		
41	18802103T	M. Trigger Arm	1		
42	18802105T	Plunger	2		
43	18802106T	Plunger Holder	2		
44	188021503T	P. Kick Lever Ass'y	1		
45	18802111T	P.K. Lever Spring	1		
46	18802113T	Solenoid	2		
47	REE2000	E. Washer	2		
48	99997006T	HL. Washer Cut	1		
49	18801316T	E. Stopper A (F)	1		
50	18801302T	E. Stopper B (F)	1		
51	18805302T	SW. Protector	1		
52	99992020T	Screw	1		
53	99850000T	Screw	1		
54	18801320T	E. Stopper Spring (F)	1		
55	18801305T	E. Stopper Collar	1		
56	188005502T	T .Gear Arm (F) Ass'y	1		
57	18800536T	T. Gear	1		
58	18800518T	T.G. Arm(F) Spring	1		
59	11140302T	Wire Clamp	1		
60	188004309T	Pinch Roller Arm (F) Ass'y	1		

Item	Part Number	Part Name	Q'ty	Description	Areas
61	18800403T	P. Arm (F) Spring	1		
62	188009307T	Flywheel (F) Ass'y	1		
63	18800908T	FL. Metal Ass'y (F)	1		
64	SPST2006Z	Screw	2		
65	99997007T	HL. Washer Cut	1		
66	99996009T	HL. Washer	1		
67	EWS243-023T	SKT Wire Ass'y	1		
68	EWR34D-30LS	Flat Wire	1		
69	18805347T	Circuit Board	1		
70	640101173T	Leaf Switch	2		
71	640101174T	Leaf Switch	1		
72	640101175T	Leaf Switch	1		
73	68040602T	Hall IC	1		
74	18805303T	IC Protector	1		
75	68150205T	Connector	1		
76	VKL5501-00B	Lock Bracket Ass'y	1		
77	VKL5342-003	Lock Cam (A)	1		
78	VKW3006-073	Spring	1		
79	Q03093-115	Washer	1		
80	SSST2605Z	Screw	2		
81	18800216T	Panel Spring Plate	1		

■ B Mechanism



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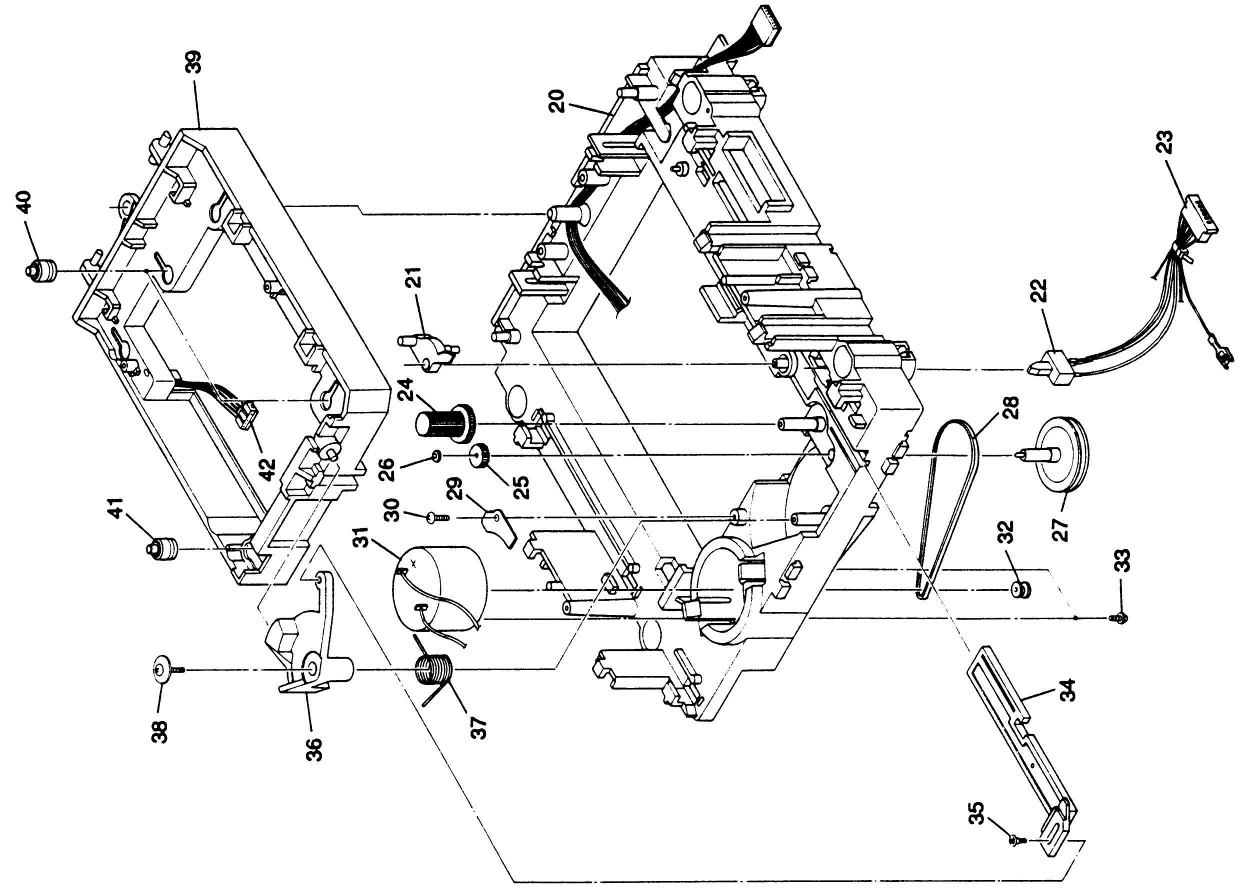
■ B Mechanism Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	188001503T	Chassis Ass'y	1		
2	18800102T	Pack Spring	1		
3	SPST2003Z	Screw	1		
4	18650260T	Clamper Spring (V)	1		
5	18800219T	Panel Collar	1		
6	18650228T	Chp Lever Collar	2		
7	186502306T	Head Base Ass'y	1		
8	18800234T	Relay Board	1		
9	99991802T	Head Collar Screw (S)	2		
10	18650961T	Spacer	1		
11	18650249T	Wire Clamp	1		
12	18800201T	Head Panel (A)	1		
13	188002501T	Head Panel (B) Ass'y	1		
14	18800204T	RC. Spring	1		
15	18800205T	Panel Spring	1		
16	18800206T	Chp Lever	1		
17	18800405T	Pinch Roller Spring	1		
18	62020604T	Head	1		
19	LPSP2005Z	Tams Screw	1		
20	95470000T	Screw	2		
21	99992020T	Screw	2		
22	99991816T	Screw	1		
23	SDSP2005Z	Bind Screw	1		
24	18800708T	RF. Belt	1		
25	188007304T	RF. Clutch Ass'y	1		
26	188005301T	T. Reel Ass'y (F)	1		
27	188005302T	T. Reel Ass'y (R)	1		
28	188005501T	Reel Base Ass'y	1		
29	18800508T	FF Gear	1		
30	18800517T	FR. Trigger Arm Spring	1		
31	18800522T	B.T. Spring (R)	2		
32	SPST2004Z	Screw	4		
33	94210000T	P. Washer Cut	3		
34	99997004T	HL. Washer Cut	3		
35	99997003T	HL. Washer Cut	2		
36	18800515T	RF. Trigger Arm	1		
37	18211266T	Motor Rubber	3		
38	18511418T	Motor Collar Screw	3		
39	18800938T	Main Belt	1		
40	18800937T	Motor Pulley	1		
41	18800911T	Motor Bracket	1		
42	60050342T	Motor	1		
43	LPSP2004Z	Tams Screw	1		
44	18800106T	M. Trigger Arm Spring	1		
45	18802115T	M. Gear	1		
46	18802116T	RF. Cam Gear	1		
47	18802103T	M. Trigger Arm	1		
48	18802105T	Plunger	2		
49	18802106T	Plunger Holdr	2		
50	188021501T	CH. Slide Lever Ass'y	1		
51	18802108T	CH. Slide Lever Spring	1		
52	188021503T	P. Kick Lever Ass'y	1		
53	18802111T	P.K. Lever Spring	1		
54	18802113T	Solenoid	2		
55	REE2000	E. Washer	2		
56	99997006T	HL. Washer Cut	1		
57	18801317T	E. Stopper A (R)	1		
58	18801307T	E. Stopper B (R)	1		
59	18805302T	SW. Protector	1		
60	99991404T	Screw	1		

Item	Part Number	Part Name	Q'ty	Description	Areas
61	18801321T	E. Stopper Spring (F)	1		
62	18801305T	E. Stopper Collor	1		
63	188005502T	T. Gear Arm (F) Ass'y	1		
64	18800536T	T. Gear	2		
65	18800518T	T.G. Arm (F) Spring	1		
66	188005503T	T. Gear Arm (R) Ass'y	1		
67	18800519T	T.G. Arm (R) Spring	1		
68	11140302T	Wire Clamp	2		
69	SPST2003Z	Screw	2		
70	188004309T	Pinch RollerArm (F) Ass'y	1		
71	18800403T	P. Arm (F) Spring	1		
72	188004310T	Pinch Roller Arm (R) Ass'y	1		
73	18800404T	P. Arm (R) Spring	1		
74	188009307T	Flywheel (F) Ass'y	1		
75	18800908T	FL Metal Ass'y (F)	1		
76	SPST2006Z	Screw	2		
77	99997007T	HL. Washer Cut	1		
78	99996003T	HL. Washer	1		
79	188009308T	Flywheel (R) Ass,y	1		
80	18800909T	FL. Metal Ass'y (R)	1		
81	99997006T	HL. Washer Cut	1		
82	99996002T	HL. Washer	1		
83	EWS245-002T	SKT Wire Ass'y	1		
84	EWR34D-25LS	Flat Wire	1		
85	18805347T	Circuit Board Ass'y	1		
86	640101173T	Leaf Switch	4		
87	640101174T	Leaf Switch	1		
88	640101175T	Leaf Switch	1		
89	68040604T	Hall IC	1		
90	18805303T	IC Protector	1		
91	68150206T	Connector	1		
92	VKL5500-00B	Lock Bracket Ass'y	1		
93	VKL5345-003	Lock Cam (B)	1		
94	VKW3006-074	Spring	1		
95	Q03093-115	Washer	1		
96	SSST2605Z	Screw	2		
97	18800216T	Panel Spring Plate	1		

CD Mechanism Ass'y and Parts List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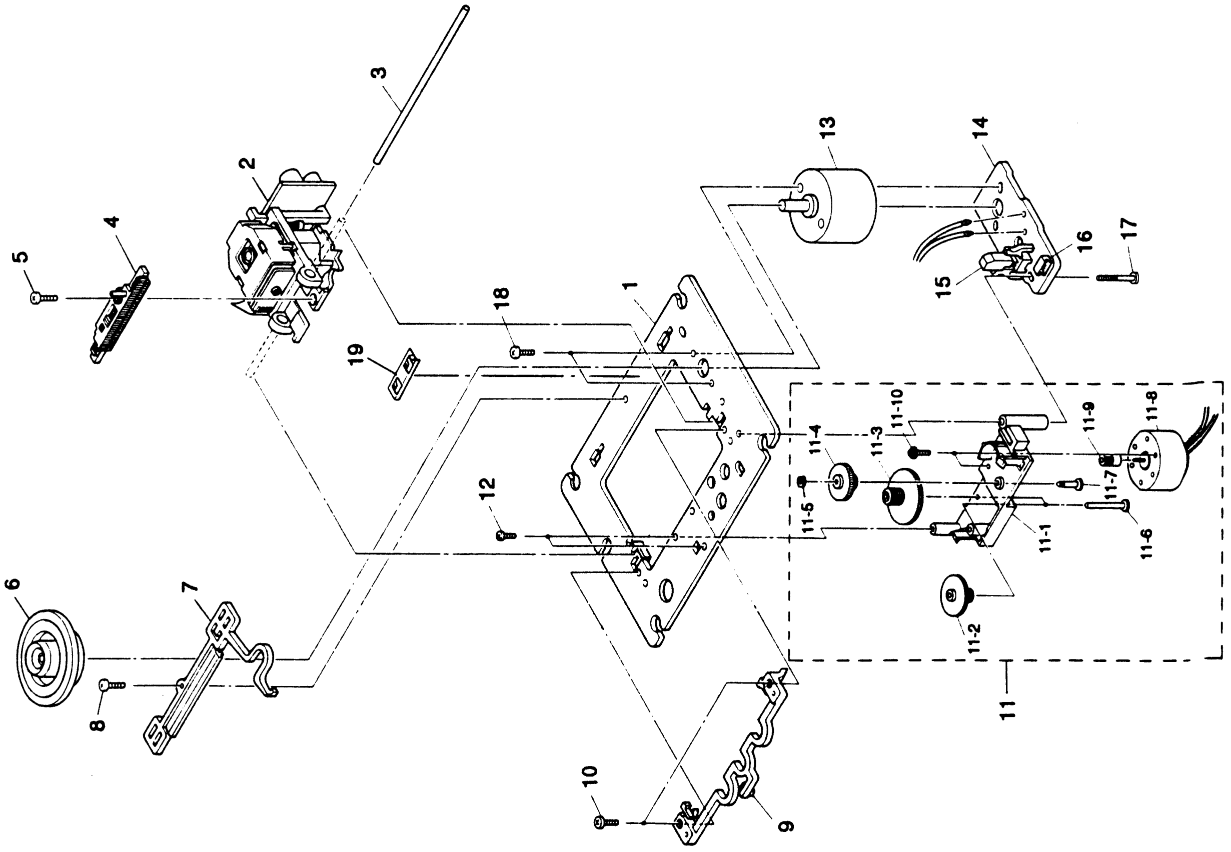
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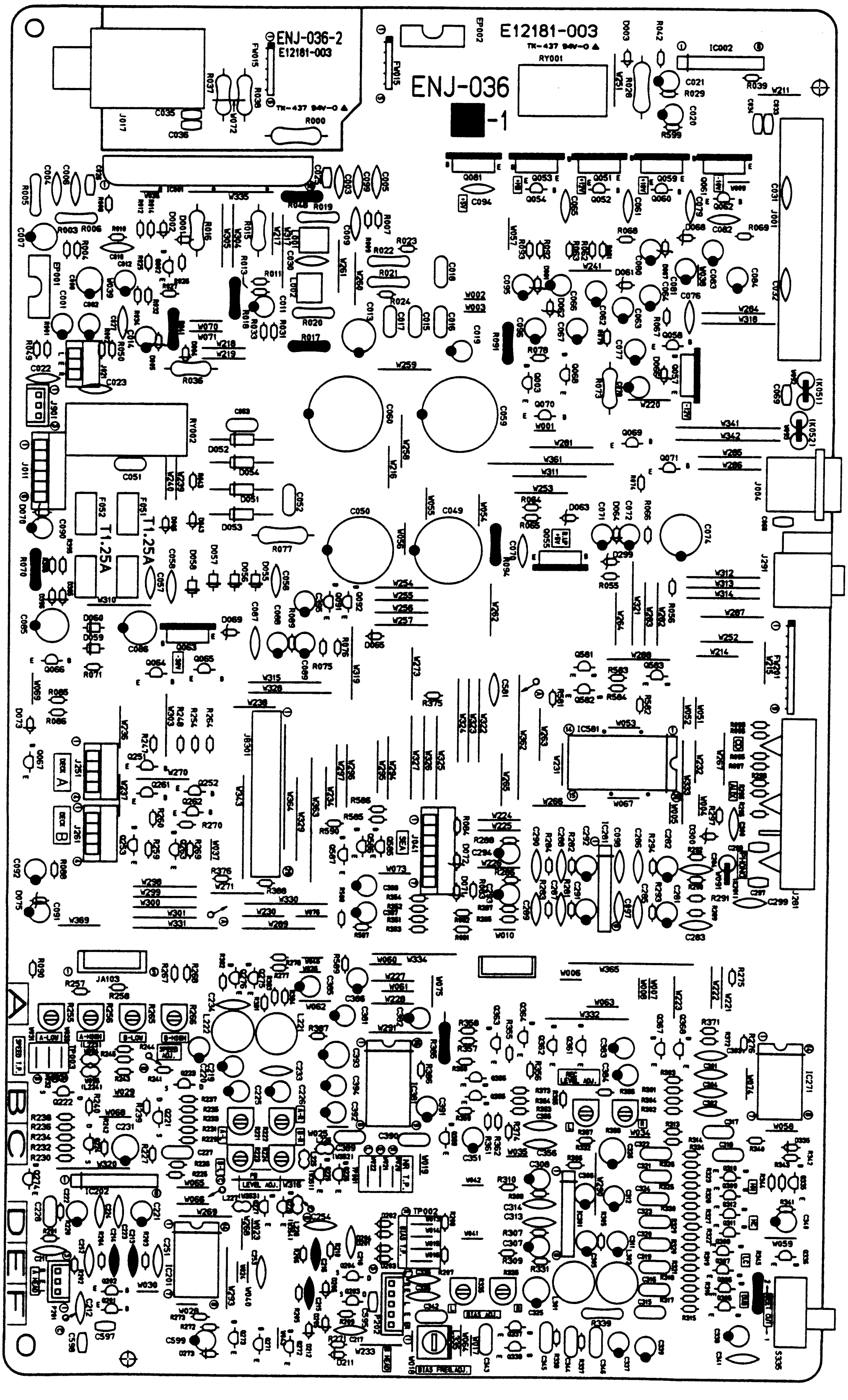
■ Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	E26487-002	Mechanism Base	1		
2	OPTIMA-5S	Pickup Ass'y	1		
3	E74930-002	Shaft	1		
4	E306282-001	Rack Ass'y	1		
5	SPSH2050M	Screw	1		
6	E75807-001	Turn Table Ass'y	1		
7	E306275-002	Support	1		
8	SDST2005Z	Screw	1		
9	E306277-001	Holder	1		
10	SDST2004Z	Screw	2		
11	SE10351-11	Gear Ass'y	1		
11- 1	E306276-001	Gear Base	1		
11- 2	E75444-001	Gear	1		
11- 3	E75443-001	Gear	1		
11- 4	E75445-001	Gear	1		
11- 5	WDM163550	Slit Washer	1		
11- 6	E75494-003	Shaft	2		
11- 7	E75494-002	Shaft	1		
11- 8	HKN-3A6RDNV	Motor	1		
11- 9	E75493-001	Pinion	1		
11-10	NPSH1735Z	Screw	2		
12	E72713-001	Special Screw	2		
13	E74539-001R	Motor	1		
14	E12114-004	Circuit Board	1	ENN-187A	
15	MSW-1731CVCA	Leaf Switch	1	S001	
16	EMV5109-006B	6p Plug Ass'y	1	P011	
17	E75832-001	Special Screw	1		
18	SDSP2003N	Screw	2		
19	E75827-001	Spring	1		
20	E12049-001	Loading Base	1		
21	E74888-003	Lock Lever	1		
22	ESS2100-003	Slide Switch	1		
23	EWS246-007	Socket Wire Ass'y	1		
24	E74887-002	Loading Gear	1		
25	E74886-003	Gear	1		
26	E72024-001	Speed Nut	1		
27	E74885-004	Pulley	1		
28	E74347-004	Belt	1		
29	E75905-001	Plate	1		
30	SBSF3008Z	Screw	1		
31	MMN-6F1LB8Q	Motor	1		
32	E75054-001	Motor Pulley	1		
33	SPSK2640Z	Screw	2		
34	E305596-003	Rack	1		
35	E73035-003	Special Screw	1		
36	E305597-005	Elevator	1		
37	E74889-002	Spring	1		
38	E65923-003	Screw	1		
39	E26521-001	Elevator Base Ass'y	1		
40	E75609-001	Insulator	2		
41	E75609-002	Insulator	1		
42	EWS256-B236	Socket Wire Ass'y	1		
43	FE-ZMS468	Shield Core	1		

Printed Circuit Board Ass'y and Parts List

■ENJ-036 ☐Cassette and Power Amplifier PC Board Ass'y

Note: ENJ-036 ☐ varies according to the areas employed . See note (1) when placing an order.



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Note (1)

PC Board Ass'y	Designated Areas
ENJ-036 A	Australia, Other Countries, Continental Europe (with LW), the U.K.(with LW), Switzerland (with LW)
ENJ-036 B	West Germany (with LW), Italy (with LW)

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q002	2SC1685(Q,R)	SILICON MATSUSHITA	
	Q003	2SC1740S(R,S)	SILICON ROHM	
	Q051	2SD2061(E,F)	SILICON ROHM	
	Q052	2SC1685(R,S)	SILICON MATSUSHITA	
	Q053	2SD2061(E,F)	SILICON ROHM	
	Q054	2SC1685(R,S)	SILICON MATSUSHITA	
	Q055	2SD2061(E,F)	SILICON ROHM	
	Q057	2SB1187(E,F)	SILICON ROHM	
	Q058	2SA564A(R,S)	SILICON MATSUSHITA	
	Q059	2SD2061(E,F)	SILICON ROHM	
	Q060	2SC1685(R,S)	SILICON MATSUSHITA	
	Q061	2SB1187(E,F)	SILICON ROHM	
	Q062	2SA564A(R,S)	SILICON MATSUSHITA	
	Q063	2SB1187(E,F)	SILICON ROHM	
	Q064	2SD2144S(VW)	SILICON ROHM	
	Q065	2SD2144S(VW)	SILICON ROHM	
	Q066	DTC144ES	SILICON ROHM	
	Q067	DTA114ES	SILICON ROHM	
	Q068	DTC144ES	SILICON ROHM	
	Q069	DTA114ES	SILICON ROHM	
	Q070	DTA144ES	SILICON ROHM	
	Q071	DTC114ES	SILICON ROHM	
	Q081	2SD2061(E,F)	SILICON ROHM	
	Q091	DTC114YS	SILICON ROHM	
	Q092	DTC114YS	SILICON ROHM	
	Q201	DTC144ES	SILICON ROHM	
	Q202	DTC144ES	SILICON ROHM	
	Q203	2SK373(O,Y)	F.E.T TOSHIBA	
	Q204	2SK373(O,Y)	F.E.T TOSHIBA	
	Q221	2SK301(P,Q)	F.E.T MATSUSHITA	
	Q222	2SK301(P,Q)	F.E.T MATSUSHITA	
	Q223	2SK301(P,Q)	F.E.T MATSUSHITA	
	Q224	2SK301(P,Q)	F.E.T MATSUSHITA	
	Q225	DTC114YS	SILICON ROHM	
	Q226	DTC114YS	SILICON ROHM	
	Q227	DTC114YS	SILICON ROHM	
	Q228	DTC114YS	SILICON ROHM	
	Q251	2SC3377(Q,R)	SILICON ROHM	
	Q252	2SC1740S(R,S)	SILICON ROHM	
	Q253	2SA933S(R,S)	SILICON ROHM	
	Q261	2SC3377(Q,R)	SILICON ROHM	
	Q262	2SC1740S(R,S)	SILICON ROHM	
	Q263	2SA933S(R,S)	SILICON ROHM	
	Q271	DTC144ES	SILICON ROHM	
	Q272	DTA144ES	SILICON ROHM	
	Q273	DTA144ES	SILICON ROHM	
	Q274	DTC144ES	SILICON ROHM	
	Q275	2SD2144S(VW)	SILICON ROHM	
	Q276	2SD2144S(VW)	SILICON ROHM	
	Q305	DTC144TS	SILICON ROHM	
	Q306	DTC144TS	SILICON ROHM	
	Q307	DTC144TS	SILICON ROHM	
	Q308	DTC144TS	SILICON ROHM	
	Q309	DTC144TS	SILICON ROHM	
	Q310	DTC144TS	SILICON ROHM	
	Q311	DTC144TS	SILICON ROHM	
	Q312	DTC144TS	SILICON ROHM	
	Q335	2SC1685(Q,R)	SILICON MATSUSHITA	
	Q336	2SC1685(Q,R)	SILICON MATSUSHITA	
	Q337	2SC1740S(R,S)	SILICON ROHM	
	Q338	2SC1740S(R,S)	SILICON ROHM	
	Q361	2SC1740S(R,S)	SILICON ROHM	
	Q362	2SC1740S(R,S)	SILICON ROHM	
	Q363	2SC1740S(R,S)	SILICON ROHM	
	Q364	2SC1740S(R,S)	SILICON ROHM	
	Q365	2SC1740S(R,S)	SILICON ROHM	
	Q366	2SC1740S(R,S)	SILICON ROHM	
	Q367	2SD2144S(VW)	SILICON ROHM	
	Q368	2SD2144S(VW)	SILICON ROHM	
	Q369	DTC144ES	SILICON ROHM	
	Q581	2SD2144S(VW)	SILICON ROHM	
	Q582	2SD2144S(VW)	SILICON ROHM	
	Q583	DTA144ES	SILICON ROHM	
	Q585	2SD2144S(VW)	SILICON ROHM	
	Q586	2SD2144S(VW)	SILICON ROHM	
	Q587	DTA144ES	SILICON ROHM	

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC001	STK4141MK5	I.C. SANYO	
	IC002	UPC1237HA	I.C. NEC	
	IC201	TC4066BP	I.C. TOSHIBA	
	IC202	UPC1228HA	I.C. NEC	
	IC271	TC4001BP	I.C. TOSHIBA	
	IC281	M5218L-R	I.C. MITSUBISHI	
	IC301	BA15218N	I.C. ROHM	
	IC381	HA12136A	I.C. HITACHI	
	IC581	TC9163N	I.C. TOSHIBA	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D001	1SS133	SILICON ROHM	
	D002	1SS133	SILICON ROHM	
	D003	1SS133	SILICON ROHM	
	D004	1SS133	SILICON ROHM	
	D005	MTZ15JC	ZENER ROHM	
	D006	1SS133	SILICON ROHM	
	D043	1SS119	SILICON HITACHI	
	D051	ERB12-02RKL1	SILICON KYOUDOU	
	D052	ERB12-02RKL1	SILICON KYOUDOU	
	D053	ERB12-02RKL1	SILICON KYOUDOU	
	D054	ERB12-02RKL1	SILICON KYOUDOU	
	D055	1SR139-200	SILICON ROHM	
	D056	1SR139-200	SILICON ROHM	
	D057	1SR139-200	SILICON ROHM	
	D058	1SR139-200	SILICON ROHM	
	D059	1SR139-200	SILICON ROHM	
	D060	1SR139-200	SILICON ROHM	
	D061	MTZ13JC	ZENER ROHM	
	D062	MTZ13JC	ZENER ROHM	
	D063	MTZ6.2JC	ZENER ROHM	
	D064	1SS133	SILICON ROHM	
	D065	1SS133	SILICON ROHM	
	D066	MTZ13JC	ZENER ROHM	
	D067	MTZ11JC	ZENER ROHM	
	D068	MTZ11JC	ZENER ROHM	
	D069	MTZ30JC	ZENER ROHM	
	D070	MTZ5.1JB	ZENER ROHM	
	D071	MTZ6.8JC	ZENER ROHM	
	D072	MTZ6.8JC	ZENER ROHM	
	D073	1SS133	SILICON ROHM	
	D075	MTZ5.1JB	ZENER ROHM	
	D081	MTZ5.6JC	ZENER ROHM	
	D201	1SS133	SILICON ROHM	
	D202	1SS133	SILICON ROHM	
	D203	1SS133	SILICON ROHM	
	D204	1SS133	SILICON ROHM	
	D205	1SS133	SILICON ROHM	
	D206	1SS133	SILICON ROHM	
	D211	1SS133	SILICON ROHM	
	D212	1SS133	SILICON ROHM	
	D273	1SS133	SILICON ROHM	
	D300	MTZ5.6JC	ZENER ROHM	
	D335	1SS133	SILICON ROHM	
	D395	1SS133	SILICON ROHM	
	D396	1SS133	SILICON ROHM	

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C001	QETB1HM-475	4.7MF 50V ELECTRO	
	C002	QETB1HM-475	4.7MF 50V ELECTRO	
	C003	QCS21HJ-101	100PF 50V CERAMIC	
	C004	QCS21HJ-101	100PF 50V CERAMIC	
	C005	QCS21HJ-820	82PF 50V CERAMIC	A
	C005	QCS21HJ-151	150PF 50V CERAMIC	B
	C006	QCS21HJ-820	82PF 50V CERAMIC	A
	C006	QCS21HJ-151	150PF 50V CERAMIC	B
	C007	QETB1CM-107	100MF 16V ELECTRO	
	C008	QETB1CM-107	100MF 16V ELECTRO	
	C009	QCS21HJ-5R0	5PF 50V CERAMIC	
	C010	QCS21HJ-5R0	5PF 50V CERAMIC	
	C011	QETB1HM-226	22MF 50V ELECTRO	
	C012	QETB1HM-226	22MF 50V ELECTRO	
	C013	QETB1HM-476	47MF 50V ELECTRO	
	C014	QETB1CM-226	22MF 16V ELECTRO	
	C015	QFLC1HK-104	0.1MF 50V CERAMIC	
	C016	QFLC1HK-104	0.1MF 50V CERAMIC	
	C017	QFLC1HK-104	0.1MF 50V CERAMIC	
	C018	QFLC1HK-104	0.1MF 50V CERAMIC	
	C019	QETB1HM-475	4.7MF 50V ELECTRO	
	C020	QETB1CM-226	22MF 16V ELECTRO	
	C021	QETB1AM-476	47MF 10V ELECTRO	
	C022	QCF21HP-103	0.01MF 50V CERAMIC	A
	C022	QCF21HP-473	0.047MF 50V CERAMIC	B
	C023	QCF21HP-473	0.047MF 50V CERAMIC	
	C025	QCSB1HJ-470	47PF 50V CERAMIC	B
	C026	QCSB1HJ-470	47PF 50V CERAMIC	B
	C027	QCS21HJ-101	100PF 50V CERAMIC	B
	C030	QCS21HJ-101	100PF 50V CERAMIC	B

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C031	QCY21HK-222	2200PF 50V CERAMIC	B
	C032	QCY21HK-222	2200PF 50V CERAMIC	B
	C033	QCGB1HK-102	1000PF 50V CERAMIC	B
	C034	QCGB1HK-102	1000PF 50V CERAMIC	B
	C035	QCBB1HK-471	470PF 50V CERAMIC	B
	C036	QCBB1HK-471	470PF 50V CERAMIC	B
	C049	QETB1VM-228	2200MF 35V ELECTRO	
	C050	QETB1VM-228	2200MF 35V ELECTRO	
	C051	QFN32AK-103	0.01MF 100V MYLAR	A
	C051	QFN82AK-104	0.1MF 100V MYLAR	B
	C052	QFN32AK-103	0.01MF 100V MYLAR	A
	C052	QFN82AK-104	0.1MF 100V MYLAR	B
	C053	QFN32AK-103	0.01MF 100V MYLAR	A
	C053	QFN82AK-104	0.1MF 100V MYLAR	B
	C056	QFN32AK-103	0.01MF 100V MYLAR	
	C057	QFN32AK-103	0.01MF 100V MYLAR	
	C058	QFN32AK-103	0.01MF 100V MYLAR	
	C059	EET4201-338	3300MF ELECTRO	
	C060	EET4201-338	3300MF ELECTRO	
	C061	QCF21HP-103	0.01MF 50V CERAMIC	
	C062	QETB1EM-476	47MF 25V ELECTRO	
	C063	QETB1CM-476	47MF 16V ELECTRO	
	C064	QETB1CM-476	47MF 16V ELECTRO	
	C065	QCF21HP-103	0.01MF 50V CERAMIC	
	C066	QETB1CM-476	47MF 16V ELECTRO	
	C067	QETB1CM-476	47MF 16V ELECTRO	
	C068	QCBB1HK-471	470PF 50V CERAMIC	B
	C069	QCVB1CM-103	0.01MF 16V CERAMIC	B
	C070	QCF21HP-103	0.01MF 50V CERAMIC	
	C071	QETB1AM-476	47MF 10V ELECTRO	
	C072	QETB1AM-476	47MF 10V ELECTRO	
	C074	QETB0JM-108	1000MF 6.3V ELECTRO	
	C076	QCF21HP-103	0.01MF 50V CERAMIC	
	C077	QETB1CM-476	47MF 16V ELECTRO	
	C078	QETB1CM-476	47MF 16V ELECTRO	
	C079	QCF21HP-103	0.01MF 50V CERAMIC	
	C080	QETB1CM-476	47MF 16V ELECTRO	
	C081	QETB1CM-476	47MF 16V ELECTRO	
	C082	QCF21HP-103	0.01MF 50V CERAMIC	
	C083	QETB1CM-476	47MF 16V ELECTRO	
	C084	QETB1CM-476	47MF 16V ELECTRO	
	C085	QETB1JM-107	100MF 63V ELECTRO	
	C086	QETB1JM-476	47MF 63V ELECTRO	
	C087	QCF21HP-103	0.01MF 50V CERAMIC	
	C088	QETB1HM-226	22MF 50V ELECTRO	
	C089	QETB1HM-226	22MF 50V ELECTRO	
	C090	QETB1HM-475	4.7MF 50V ELECTRO	
	C091	QETB1CM-476	47MF 16V ELECTRO	
	C092	QETB1AM-476	47MF 10V ELECTRO	
	C094	QCF21HP-103	0.01MF 50V CERAMIC	
	C095	QETB1AM-476	47MF 10V ELECTRO	
	C096	QETB1AM-476	47MF 10V ELECTRO	
	C097	QCF21HP-473	0.047MF 50V CERAMIC	B
	C098	QCF21HP-473	0.047MF 50V CERAMIC	B
	C099	QCY21HK-472	4700PF 50V CERAMIC	B
	C211	QCS21HJ-221	220PF 50V CERAMIC	
	C212	QCS21HJ-221	220PF 50V CERAMIC	
	C213	QCS21HJ-331	330PF 50V CERAMIC	
	C214	QCS21HJ-331	330PF 50V CERAMIC	
	C215	QCS21HJ-391	390PF 50V CERAMIC	
	C216	QCS21HJ-391	390PF 50V CERAMIC	
	C219	QETB1HM-105	1MF 50V ELECTRO	
	C220	QETB1HM-105	1MF 50V ELECTRO	
	C221	QETB1HM-225	2.2MF 50V ELECTRO	
	C222	QETB1HM-225	2.2MF 50V ELECTRO	
	C223	QCS21HJ-101	100PF 50V CERAMIC	
	C224	QCS21HJ-101	100PF 50V CERAMIC	
	C225	QETB1CM-476	47MF 16V ELECTRO	
	C226	QETB1CM-476	47MF 16V ELECTRO	
	C227	QFLC1HJ-822	8200PF 50V CERAMIC	
	C228	QFLC1HJ-822	8200PF 50V CERAMIC	
	C231	QETB1CM-107	100MF 16V ELECTRO	
	C233	QCS21HJ-101	100PF 50V CERAMIC	
	C234	QCS21HJ-101	100PF 50V CERAMIC	
	C251	QCS21HJ-331	330PF 50V CERAMIC	
	C252	QCS21HJ-331	330PF 50V CERAMIC	
	C253	QCY21HK-102	1000PF 50V CERAMIC	
	C254	QCY21HK-102	1000PF 50V CERAMIC	
	C281	QETB1HM-225	2.2MF 50V ELECTRO	
	C282	QETB1HM-225	2.2MF 50V ELECTRO	
	C283	QCS21HJ-101	100PF 50V CERAMIC	A
	C283	QCS21HJ-221	220PF 50V CERAMIC	B
	C284	QCS21HJ-101	100PF 50V CERAMIC	A
	C284	QCS21HJ-221	220PF 50V CERAMIC	B
	C285	QCS21HJ-101	100PF 50V CERAMIC	
	C286	QCS21HJ-101	100PF 50V CERAMIC	
	C287	QCY21HK-682	6800PF 50V CERAMIC	
	C288	QCY21HK-682	6800PF 50V CERAMIC	
	C289	QCY21HK-182	1800PF 50V CERAMIC	
	C290	QCY21HK-182	1800PF 50V CERAMIC	
	C291	QETB1EM-226	22MF 25V ELECTRO	
	C292	QETB1EM-226	22MF 25V ELECTRO	
	C293	QETB1HM-225	2.2MF 50V ELECTRO	
	C294	QETB1HM-225	2.2MF 50V ELECTRO	
	C297	QCBB1HK-221	220PF 50V CERAMIC	B

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C298	QCBB1HK-221	220PF 50V CERAMIC	B
	C299	QCF21HP-103	0.01MF 50V CERAMIC	A
	C299	QCF21HP-473	0.047MF 50V CERAMIC	B
	C300	QCF21HP-103	0.01MF 50V CERAMIC	
	C301	QCF21HP-473	0.047MF 50V CERAMIC	
	C302	QCF21HP-473	0.047MF 50V CERAMIC	
	C303	QCY21HK-122	1200PF 50V CERAMIC	
	C304	QCY21HK-122	1200PF 50V CERAMIC	
	C305	QETB1HM-225	2.2MF 50V ELECTRO	
	C306	QETB1HM-225	2.2MF 50V ELECTRO	
	C307	QETB1HM-225	2.2MF 50V ELECTRO	
	C308	QETB1HM-225	2.2MF 50V ELECTRO	
	C311	QETB1EM-106	10MF 25V ELECTRO	
	C312	QETB1EM-106	10MF 25V ELECTRO	
	C313	QCS21HJ-470	47PF 50V CERAMIC	
	C314	QCS21HJ-470	47PF 50V CERAMIC	
	C315	QFLC1HK-682	6800PF 50V CERAMIC	
	C316	QFLC1HK-682	6800PF 50V CERAMIC	
	C317	QFLC1HK-562	5600PF 50V CERAMIC	
	C318	QFLC1HK-562	5600PF 50V CERAMIC	
	C319	QFLC1HK-123	0.012MF 50V CERAMIC	
	C320	QFLC1HK-123	0.012MF 50V CERAMIC	
	C321	QFLC1HK-332	3300PF 50V CERAMIC	
	C322	QFLC1HK-332	3300PF 50V CERAMIC	
	C323	QFLC1HK-103	0.01MF 50V CERAMIC	
	C324	QFLC1HK-103	0.01MF 50V CERAMIC	
	C325	QETB1CM-107	100MF 16V ELECTRO	
	C326	QETB1CM-107	100MF 16V ELECTRO	
	C335	QCS21HJ-101	100PF 50V CERAMIC	
	C336	QCS21HJ-101	100PF 50V CERAMIC	
	C337	QETB1EM-106	10MF 25V ELECTRO	
	C338	QETB1CM-476	47MF 16V ELECTRO	
	C339	QETB1HM-105	1MF 50V ELECTRO	
	C340	QETB1HM-105	1MF 50V ELECTRO	
	C341	QCS21HJ-561	560PF 50V CERAMIC	
	C342	QFP81HJ-822	8200PF 50V POLY	
	C343	QFV81HJ-123	0.012MF 50V T.FILM	
	C344	QFLC1HJ-222	2200PF 50V CERAMIC	
	C345	QFLC1HJ-222	2200PF 50V CERAMIC	
	C346	QFLC1HJ-682	6800PF 50V CERAMIC	
	C351	QETB1EM-106	10MF 25V ELECTRO	
	C355	QCF21HP-473	0.047MF 50V CERAMIC	
	C356	QCF21HP-473	0.047MF 50V CERAMIC	
	C381	QEK61HM-105G	1MF 50V ELECTRO	
	C382	QEK61HM-105G	1MF 50V ELECTRO	
	C383	QEK61EM-475G	4.7MF 25V ELECTRO	
	C384	QEK61EM-475G	4.7MF 25V ELECTRO	
	C385	QEK61HM-105G	1MF 50V ELECTRO	
	C386	QEK61HM-105G	1MF 50V ELECTRO	
	C387	QETB1HM-475	4.7MF 50V ELECTRO	
	C388	QETB1HM-475	4.7MF 50V ELECTRO	
	C389	QFV81HJ-224	0.22MF 50V T.FILM	
	C390	QFV81HJ-224	0.22MF 50V T.FILM	
	C391	QETB1HM-475	4.7MF 50V ELECTRO	
	C392	QETB1HM-475	4.7MF 50V ELECTRO	
	C393	QETB1CM-107	100MF 16V ELECTRO	
	C394	QETB1HM-475	4.7MF 50V ELECTRO	
	C395	QETB1HM-105	1MF 50V ELECTRO	
	C581	QCS21HJ-561	560PF 50V CERAMIC	
	C595	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C597	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C598	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C599	QETB1CM-227	220MF 16V ELECTRO	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
⚠	R000	QRG022J-471AM	470 2W O.M.FILM	
	R001	QRD167J-102	1K 1/6W CARBON	
	R002	QRD167J-102	1K 1/6W CARBON	
	R003	QRD167J-104	100K 1/6W CARBON	
	R004	QRD167J-104	100K 1/6W CARBON	
⚠	R005	QRD14CJ-681S	680 1/4W UNF.CARBON	
⚠	R006	QRD14CJ-681S	680 1/4W UNF.CARBON	
	R007	QRD167J-471	470 1/6W CARBON	
	R008	QRD167J-471	470 1/6W CARBON	
	R009	QRD167J-104	100K 1/6W CARBON	
	R010	QRD167J-104	100K 1/6W CARBON	
	R011	QRD167J-562	5.6K 1/6W CARBON	
	R012	QRD167J-562	5.6K 1/6W CARBON	
	R013	QRD167J-562	5.6K 1/6W CARBON	
	R014	QRD167J-562	5.6K 1/6W CARBON	
⚠	R015	QRX012J-R22AM	0.22 1W M.FILM	
⚠	R016	QRX012J-R22AM	0.22 1W M.FILM	
⚠	R017	QRZ0077-101	100 1/4W FUSIBLE	
⚠	R018	QRZ0077-100	10 1/4W FUSIBLE	
⚠	R019	QRD14CJ-100S	10 1/4W UNF.CARBON	
⚠	R020	QRD14CJ-100S	10 1/4W UNF.CARBON	
⚠	R021	QRD14CJ-100S	10 1/4W UNF.CARBON	
⚠	R022	QRD14CJ-100S	10 1/4W UNF.CARBON	
	R023	QRD167J-823	82K 1/6W CARBON	
	R024	QRD167J-104	100K 1/6W CARBON	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R025	QRD167J-103	10K 1/6W CARBON	
	R026	QRD167J-333	33K 1/6W CARBON	
	R027	QRD167J-562	5.6K 1/6W CARBON	
⚠	R028	QRG022J-471AM	470 2W O.M.FILM	
	R029	QRD167J-104	100K 1/6W CARBON	
	R031	QRD167J-562	5.6K 1/6W CARBON	
	R032	QRD167J-562	5.6K 1/6W CARBON	
	R033	QRD167J-562	5.6K 1/6W CARBON	
	R034	QRD167J-562	5.6K 1/6W CARBON	
⚠	R036	QRD125J-222	2.2K 1/2W UNF.CARBON	
⚠	R037	QRD125J-221	220 1/2W UNF.CARBON	
⚠	R038	QRD125J-221	220 1/2W UNF.CARBON	
	R039	QRD167J-184	180K 1/6W CARBON	
⚠	R041	QRZ0077-100	10 1/4W FUSIBLE	
	R042	QRD167J-123	12K 1/6W CARBON	
	R043	QRD167J-822	8.2K 1/6W CARBON	
⚠	R048	QRZ0077-100	10 1/4W FUSIBLE	
	R049	QRD167J-104	100K 1/6W CARBON	
	R050	QRD167J-104	100K 1/6W CARBON	
	R061	QRD167J-152	1.5K 1/6W CARBON	
	R062	QRD167J-471	470 1/6W CARBON	
	R063	QRD167J-152	1.5K 1/6W CARBON	
	R064	QRD167J-472	4.7K 1/6W CARBON	
	R065	QRD167J-472	4.7K 1/6W CARBON	
	R066	QRD167J-470	47 1/6W CARBON	
	R067	QRD167J-152	1.5K 1/6W CARBON	
	R068	QRD167J-152	1.5K 1/6W CARBON	
	R069	QRD167J-302	3K 1/6W CARBON	
⚠	R070	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R071	QRD167J-392	3.9K 1/6W CARBON	
⚠	R073	QRD125J-222	2.2K 1/2W UNF.CARBON	
	R074	QRD167J-153	15K 1/6W CARBON	
	R075	QRD167J-103	10K 1/6W CARBON	
	R076	QRD167J-102	1K 1/6W CARBON	
⚠	R077	QRG022J-271AM	270 2W O.M.FILM	
	R078	QRD167J-472	4.7K 1/6W CARBON	
	R080	QRD167J-302	3K 1/6W CARBON	
	R081	QRD167J-121	120 1/6W CARBON	
	R082	QRD167J-121	120 1/6W CARBON	
	R083	QRD167J-121	120 1/6W CARBON	
	R084	QRD167J-121	120 1/6W CARBON	
	R085	QRD167J-103	10K 1/6W CARBON	
	R086	QRD167J-103	10K 1/6W CARBON	
	R088	QRD167J-471	470 1/6W CARBON	
	R089	QRD167J-103	10K 1/6W CARBON	
	R090	QRD167J-101	100 1/6W CARBON	
⚠	R091	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R092	QRD167J-472	4.7K 1/6W CARBON	
	R093	QRD167J-472	4.7K 1/6W CARBON	
⚠	R094	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R095	QRD167J-362	3.6K 1/6W CARBON	
	R096	QRD167J-362	3.6K 1/6W CARBON	
	R097	QRD167J-682	6.8K 1/6W CARBON	
	R098	QRD167J-682	6.8K 1/6W CARBON	
	R203	QRD167J-104	100K 1/6W CARBON	
	R204	QRD167J-104	100K 1/6W CARBON	
	R205	QRD167J-473	47K 1/6W CARBON	
	R206	QRD167J-473	47K 1/6W CARBON	
	R207	QRD167J-100	10 1/6W CARBON	
	R208	QRD167J-100	10 1/6W CARBON	
	R209	QRD167J-105	1M 1/6W CARBON	
	R210	QRD167J-105	1M 1/6W CARBON	
	R221	QVPA601-201A	200 VARIABLE	
	R222	QVPA601-201A	200 VARIABLE	
	R223	QVPA601-201A	200 VARIABLE	
	R224	QVPA601-201A	200 VARIABLE	
	R225	QRD167J-470	47 1/6W CARBON	
	R226	QRD167J-470	47 1/6W CARBON	
	R227	QRD167J-334	330K 1/6W CARBON	
	R228	QRD167J-334	330K 1/6W CARBON	
	R229	QRD167J-432	4.3K 1/6W CARBON	
	R230	QRD167J-432	4.3K 1/6W CARBON	
	R231	QRD167J-152	1.5K 1/6W CARBON	
	R232	QRD167J-152	1.5K 1/6W CARBON	
	R233	QRD167J-512	5.1K 1/6W CARBON	
	R234	QRD167J-512	5.1K 1/6W CARBON	
	R235	QRD167J-223	22K 1/6W CARBON	
	R236	QRD167J-223	22K 1/6W CARBON	
	R237	QRD167J-512	5.1K 1/6W CARBON	
	R238	QRD167J-512	5.1K 1/6W CARBON	
	R239	QRD167J-105	1M 1/6W CARBON	
	R240	QRD167J-105	1M 1/6W CARBON	
	R241	QRD167J-105	1M 1/6W CARBON	
	R242	QRD167J-105	1M 1/6W CARBON	
	R243	QRD167J-471	470 1/6W CARBON	
	R244	QRD167J-472	4.7K 1/6W CARBON	
	R245	QRD167J-472	4.7K 1/6W CARBON	
	R247	QRD167J-102	1K 1/6W CARBON	
	R248	QRD167J-102	1K 1/6W CARBON	
	R254	QRD167J-103	10K 1/6W CARBON	
	R255	QVPA601-502A	5K VARIABLE	
	R256	QVPA601-502A	5K VARIABLE	
	R257	QRD167J-133	13K 1/6W CARBON	
	R258	QRD167J-123	12K 1/6W CARBON	
	R259	QRD167J-224	220K 1/6W CARBON	
	R260	QRD167J-394	390K 1/6W CARBON	
	R264	QRD167J-103	10K 1/6W CARBON	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R265	QVPA601-502A	5K VARIABLE	
	R266	QVPA601-502A	5K VARIABLE	
	R267	QRD167J-133	13K 1/6W CARBON	
	R268	QRD167J-123	12K 1/6W CARBON	
	R269	QRD167J-224	220K 1/6W CARBON	
	R270	QRD167J-394	390K 1/6W CARBON	
	R271	QRD167J-103	10K 1/6W CARBON	
	R272	QRD167J-472	4.7K 1/6W CARBON	
	R273	QRD167J-472	4.7K 1/6W CARBON	
	R275	QRD167J-102	1K 1/6W CARBON	
	R276	QRD167J-102	1K 1/6W CARBON	
	R277	QRD167J-103	10K 1/6W CARBON	
	R278	QRD167J-103	10K 1/6W CARBON	
	R281	QRD167J-474	470K 1/6W CARBON	
	R282	QRD167J-474	470K 1/6W CARBON	
	R283	QRD167J-393	39K 1/6W CARBON	
	R284	QRD167J-393	39K 1/6W CARBON	
	R285	QRD167J-112	1.1K 1/6W CARBON	
	R286	QRD167J-112	1.1K 1/6W CARBON	
	R287	QRD167J-104	100K 1/6W CARBON	
	R288	QRD167J-104	100K 1/6W CARBON	
	R289	QRD167J-104	100K 1/6W CARBON	
	R290	QRD167J-104	100K 1/6W CARBON	
	R291	QRD167J-272	2.7K 1/6W CARBON	
	R292	QRD167J-272	2.7K 1/6W CARBON	
	R293	QRD167J-104	100K 1/6W CARBON	
	R294	QRD167J-104	100K 1/6W CARBON	
	R295	QRD167J-243	24K 1/6W CARBON	
	R296	QRD167J-243	24K 1/6W CARBON	
	R297	QRD167J-513	51K 1/6W CARBON	
	R298	QRD167J-513	51K 1/6W CARBON	
	R301	QRD167J-333	33K 1/6W CARBON	
	R302	QRD167J-333	33K 1/6W CARBON	
	R303	QRD167J-473	47K 1/6W CARBON	
	R304	QRD167J-473	47K 1/6W CARBON	
	R305	QRD167J-683	68K 1/6W CARBON	
	R306	QRD167J-683	68K 1/6W CARBON	
	R307	QRD167J-153	15K 1/6W CARBON	
	R308	QRD167J-153	15K 1/6W CARBON	
	R309	QRD167J-153	15K 1/6W CARBON	
	R310	QRD167J-153	15K 1/6W CARBON	
	R313	QRD167J-182	1.8K 1/6W CARBON	
	R314	QRD167J-182	1.8K 1/6W CARBON	
	R315	QRD167J-511	510 1/6W CARBON	
	R316	QRD167J-511	510 1/6W CARBON	
	R317	QRD167J-301	300 1/6W CARBON	
	R318	QRD167J-301	300 1/6W CARBON	
	R319	QRD167J-472	4.7K 1/6W CARBON	
	R320	QRD167J-472	4.7K 1/6W CARBON	
	R321	QRD167J-362	3.6K 1/6W CARBON	
	R322	QRD167J-362	3.6K 1/6W CARBON	
	R323	QRD167J-122	1.2K 1/6W CARBON	
	R324	QRD167J-122	1.2K 1/6W CARBON	
	R325	QRD167J-104	100K 1/6W CARBON	
	R326	QRD167J-104	100K 1/6W CARBON	
	R327	QRD167J-151	150 1/6W CARBON	
	R328	QRD167J-151	150 1/6W CARBON	
	R329	QRD167J-302	3K 1/6W CARBON	
	R330	QRD167J-302	3K 1/6W CARBON	
	R331	QRD167J-221	220 1/6W CARBON	
	R332	QRD167J-221	220 1/6W CARBON	
	R335	QVPA601-104A	100K VARIABLE	
	R336	QVPA601-104A	100K VARIABLE	
	R337	QRD167J-473	47K 1/6W CARBON	
	R338	QRD167J-473	47K 1/6W CARBON	
⚠	R339	QRD14CJ-5R6S	5.6 1/4W UNF.CARBON	
	R340	QRD167J-472	4.7K 1/6W CARBON	
	R341	QRD167J-104	100K 1/6W CARBON	
	R342	QRD167J-332	3.3K 1/6W CARBON	
	R343	QRD167J-151	150 1/6W CARBON	
	R344	QRD167J-151	150 1/6W CARBON	
⚠	R345	QRZ0077-100	10 1/4W FUSIBLE	
	R351	QRD167J-153	15K 1/6W CARBON	
	R352	QRD167J-153	15K 1/6W CARBON	
	R353	QRD167J-182	1.8K 1/6W CARBON	
	R354	QRD167J-182	1.8K 1/6W CARBON	
	R355	QRD167J-561	560 1/6W CARBON	
	R356	QRD167J-561	560 1/6W CARBON	
	R357	QRD167J-223	22K 1/6W CARBON	
	R358	QRD167J-223	22K 1/6W CARBON	
	R359	QRD167J-392	3.9K 1/6W CARBON	
	R360	QRD167J-392	3.9K 1/6W CARBON	
	R361	QRD167J-473	47K 1/6W CARBON	
	R362	QRD167J-473	47K 1/6W CARBON	
	R363	QRD167J-153	15K 1/6W CARBON	
	R364	QRD167J-153	15K 1/6W CARBON	
	R365	QRD167J-103	10K 1/6W CARBON	
	R366	QRD167J-103	10K 1/6W CARBON	
	R367	QVPA601-503A	50K VARIABLE	
	R368	QVPA601-503A	50K VARIABLE	
	R371	QRD167J-103	10K 1/6W CARBON	
	R372	QRD167J-103	10K 1/6W CARBON	
	R373	QRD167J-393	39K 1/6W CARBON	
	R374	QRD167J-132	1.3K 1/6W CARBON	
	R375	QRD167J-222	2.2K 1/6W CARBON	

Resistors

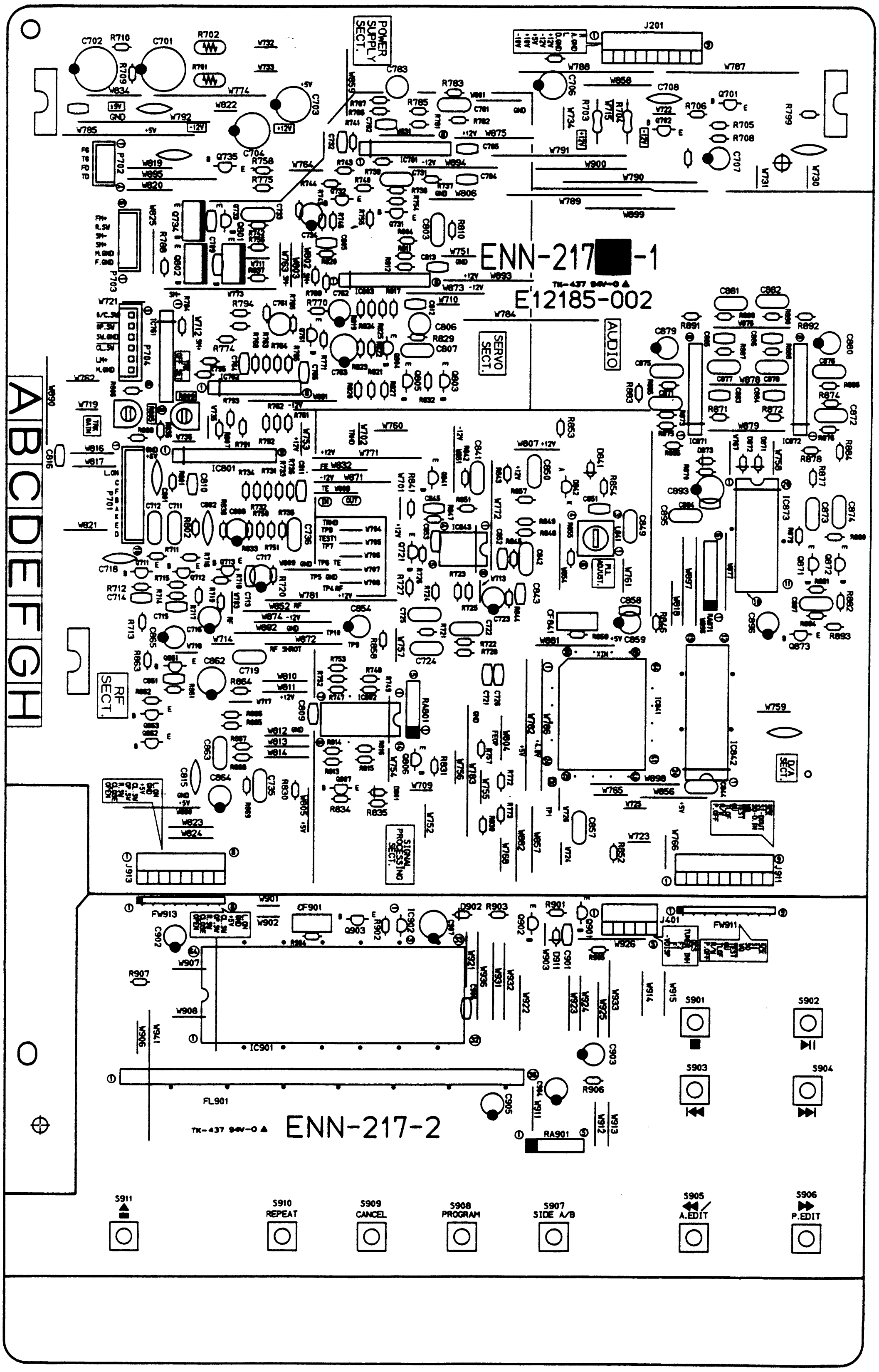
⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R376	QRD167J-222	2.2K 1/6W CARBON	
	R381	QRD167J-153	15K 1/6W CARBON	
	R382	QRD167J-153	15K 1/6W CARBON	
	R383	QRD167J-822	8.2K 1/6W CARBON	
	R384	QRD167J-822	8.2K 1/6W CARBON	
⚠	R385	QRZ0077-220	22 1/4W FUSIBLE	
	R386	QRD167J-183	18K 1/6W CARBON	
	R337	QRD167J-103	10K 1/6W CARBON	
	R388	QRD167J-103	10K 1/6W CARBON	
	R395	QRD167J-103	10K 1/6W CARBON	
	R396	QRD167J-103	10K 1/6W CARBON	
	R581	QRD167J-102	1K 1/6W CARBON	
	R582	QRD167J-102	1K 1/6W CARBON	
	R583	QRD167J-103	10K 1/6W CARBON	
	R584	QRD167J-103	10K 1/6W CARBON	
	R585	QRD167J-103	10K 1/6W CARBON	
	R586	QRD167J-103	10K 1/6W CARBON	
	R587	QRD167J-822	8.2K 1/6W CARBON	
	R588	QRD167J-822	8.2K 1/6W CARBON	
	R589	QRD167J-472	4.7K 1/6W CARBON	
	R590	QRD167J-472	4.7K 1/6W CARBON	
	R599	QRD167J-102	1K 1/6W CARBON	

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMG7331-001	FUSE CLIP	
		E12181-003	CIRCUIT BOARD	
	J001	EMB90YV-401A	SPEAKER TERMINAL	
	J004	QMA1221-009	DC JACK	
	J011	VMC0107-006	SOCKET	
	J017	QMS6312-024	HEADPHONE JACK	
	J021	VMC0107-003	CONNECTOR	
	J041	VMC0107-007	SOCKET	
	J251	VMC0107-004	CONNECTOR	
	J261	VMC0107-004	CONNECTOR	
	J281	EMN00TV-405A	4P PIN JACK	
	J901	EMV5133-003K	PLUG ASSY	
	K051	ENZ8101-007	INDUCTOR	B
	K052	ENZ8101-007	INDUCTOR	B
	K281	ENZ8101-008	INDUCTOR	B
	L001	EQL0001-R45	INDUCTOR	
	L002	EQL0001-R45	INDUCTOR	
	L221	EQL2106-223	INDUCTOR	
	L222	EQL2106-223	INDUCTOR	
	L223	EQL4004-101	INDUCTOR	B
	L224	EQL4004-101	INDUCTOR	B
	L301	EQL2106-562	INDUCTOR	
	L302	EQL2106-562	INDUCTOR	
	L335	ENZ6002-010	OSC COIL	
	P201	EMV5133-003K	PLUG ASSY	
	P202	EMV5133-005K	PLUG ASSY	
	S335	QSS6A12-E01	SLIDE SWITCH	
	EP001	E70859-001	EARTH PLATE	
	EP002	E70859-001	EARTH PLATE	B
	FW015	EWR35B-30SST	FLAT WIRE	
	FW201	EWR39B-35LST	FLAT WIRE	
	JA103	EMV5125-005	PLUG ASSY	
	JA104	EMV5125-004	PLUG ASSY	
	JB301	EMV7123-029	CONNECTOR	
	RY001	ESK8D24-212	RELAY	
	RY002	ESK1D12-211M	RELAY	

■ENN-217☐ CD PC Board Ass'y

Note: ENN-217☐ varies according to the areas employed . See note (1) when placing an order.


POWER SUPPLY SECT.
J201
ENN-217■-1
TK-437 94V-0 ▲
E12185-002
SERVO SECT.
AUDIO
A
B
C
D
E
F
G
H
RF SECT.
SIGNAL PROCESSING SECT.
D/A SECT.
J913
J911
J401
IC901
FL901
TK-437 94V-0 ▲
ENN-217-2
RA901
S901
S902
S903
S904
S911
S910 REPEAT
S909 CANCEL
S908 PROGRAM
S907 SIDE A/B
S905 A.EDIT
S906 P.EDIT

Note (1)

PC Board Ass'y	Designated Areas
ENN-217 A	Australia, Other Countries, Continental Europe (with LW), the U.K.(with LW), Switzerland (with LW)
ENN-217 B	West Germany (with LW), Italy (with LW)

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q701	2SA934(Q,R)	SILICON	ROHM	
	Q711	2SC535(B,C)	SILICON	HITACHI	
	Q712	2SC1740S(R,S)	SILICON	ROHM	
	Q713	2SA933S(R,S)	SILICON	ROHM	
	Q721	2SD2144S(VW)	SILICON	ROHM	
	Q731	2SD2144S(VW)	SILICON	ROHM	
	Q732	2SA933S(R,S)	SILICON	ROHM	
	Q733	2SC2060(Q,R)	SILICON	ROHM	
	Q734	2SB1357(E,F)	SILICON	ROHM	
	Q735	DTA144WS	SILICON	ROHM	
	Q761	2SD2144S(VW)	SILICON	ROHM	
	Q801	2SD2037(E,F)	SILICON	ROHM	
	Q802	2SB1357(E,F)	SILICON	ROHM	
	Q803	2SD2144S(VW)	SILICON	ROHM	
	Q804	2SD2144S(VW)	SILICON	ROHM	
	Q805	2SD2144S(VW)	SILICON	ROHM	
	Q806	2SA933S(R,S)	SILICON	ROHM	
	Q807	2SC1740S(R,S)	SILICON	ROHM	
	Q841	2SD2144S(VW)	SILICON	ROHM	
	Q861	2SA933S(R,S)	SILICON	ROHM	
	Q862	2SC1740S(R,S)	SILICON	ROHM	
	Q863	2SC1740S(R,S)	SILICON	ROHM	
	Q871	2SD2144S(VW)	SILICON	ROHM	
	Q872	2SD2144S(VW)	SILICON	ROHM	
	Q873	DTA114YS	SILICON	ROHM	
	Q901	DTC144WS	SILICON	ROHM	
	Q902	DTA114YS	SILICON	ROHM	
	Q903	DTC114YS	SILICON	ROHM	

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC761	STA341M(A)	I.C.	SANKEN	
	IC762	VC4580L	I.C.	DAINICHI	
	IC781	VC4580L	I.C.	DAINICHI	
	IC801	NJM072S	I.C.	DAINICHI	
	IC802	BA10339	I.C.	ROHM	
	IC803	VC4580L	I.C.	DAINICHI	
	IC841	YM3805-H	I.C.	YAMAHA	
	IC842	LC3517BS-15	I.C.	SANYO	
	IC843	M5209P	I.C.	MITSUBISHI	
	IC871	VC4580L	I.C.	DAINICHI	
	IC872	VC4580L	I.C.	DAINICHI	
	IC873	LC7881-C	I.C.	SANYO	
	IC901	HD614081SB46	I.C.	HITACHI	
	IC902	MN1281(P,Q)	I.C.	MATSUSHITA	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D801	1SS133	SILICON	ROHM	
	D841	MTZ5.1JB	ZENER	ROHM	
	D842	SVC321-AW	VARICAP	SANYO	
	D871	1SS133	SILICON	ROHM	
	D872	1SS133	SILICON	ROHM	
	D873	MTZ5.1JB	ZENER	ROHM	
	D902	1SS133	SILICON	ROHM	
	D911	1SS133	SILICON	ROHM	

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C701	QETB1CM-227	220MF	16V	ELECTRO	
	C702	QETB1CM-227	220MF	16V	ELECTRO	
	C703	QETB1CM-227	220MF	16V	ELECTRO	
	C704	QETB1CM-227	220MF	16V	ELECTRO	
	C706	QETB1AM-227	220MF	10V	ELECTRO	
	C707	QETB1AM-227	220MF	10V	ELECTRO	
	C709	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C711	QFLC1HJ-472	4700PF	50V	CERAMIC	
	C712	QFLC1HJ-472	4700PF	50V	CERAMIC	
	C713	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C714	QCSB1HJ-3R9	3.9PF	50V	CERAMIC	
	C715	QCBB1HK-471	470PF	50V	CERAMIC	
	C716	QETB1EM-106	10MF	25V	ELECTRO	
	C717	QETB1CM-476	47MF	16V	ELECTRO	
	C718	QCS21HJ-680	68PF	50V	CERAMIC	
	C719	QFV81HJ-154	0.15MF	50V	T.FILM	
	C721	QCSB1HJ-470	47PF	50V	CERAMIC	
	C722	QFV81HJ-103	0.01MF	50V	T.FILM	
	C723	QETB1EM-106	10MF	25V	ELECTRO	
	C724	QFV81HJ-473	0.047MF	50V	T.FILM	
	C725	QFV81HJ-474	0.47MF	50V	T.FILM	
	C726	QCSB1HJ-180	18PF	50V	CERAMIC	
	C731	QFV81HJ-183	0.018MF	50V	T.FILM	
	C732	QCBB1HK-271	270PF	50V	CERAMIC	
	C733	QFV81HJ-393	0.039MF	50V	T.FILM	
	C734	QETB1CM-226	22MF	16V	ELECTRO	
	C735	QFV81HJ-104	0.1MF	50V	T.FILM	
	C736	QFV81HJ-224	0.22MF	50V	T.FILM	
	C761	QEN51HM-225	2.2MF	50V	NON POLE	
	C762	QETB1EM-226	22MF	25V	ELECTRO	
	C763	QETB0JM-227	220MF	6.3V	ELECTRO	
	C764	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C765	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C781	QFLC1HJ-272	2700PF	50V	CERAMIC	
	C782	QCBB1HK-101	100PF	50V	CERAMIC	
	C783	QEN51HM-225	2.2MF	50V	NON POLE	
	C784	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C785	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C801	QCT26CH-151	150PF	50V	CERAMIC	
	C802	QCT26CH-121	120PF	50V	CERAMIC	
	C803	QFV81HJ-223	0.022MF	50V	T.FILM	
	C805	QCSB1HJ-4R7	4.7PF	50V	CERAMIC	
	C806	QEN51HM-225	2.2MF	50V	NON POLE	
	C807	QFV81HJ-563	0.056MF	50V	T.FILM	
	C808	QETB1CM-476	47MF	16V	ELECTRO	
	C809	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C810	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C811	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C812	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C813	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C815	QCF21HP-473	0.047MF	50V	CERAMIC	
	C816	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C841	QFV81HJ-103	0.01MF	50V	T.FILM	
	C842	QFV81HJ-474	0.47MF	50V	T.FILM	
	C843	QCGB1HK-102	1000PF	50V	CERAMIC	
	C844	QCZ0202-155	1.5MF	25V	CERAMIC	
	C845	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C849	QFP81HJ-151	150PF	50V	POLY	
	C850	QFP81HJ-471	470PF	50V	POLY	
	C851	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C852	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C853	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C854	QETB1HM-474	0.47MF	50V	ELECTRO	
	C857	QFLC1HK-124	0.12MF	50V	CERAMIC	
	C858	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C859	QETB1AM-107	100MF	10V	ELECTRO	
	C861	QCBB1HK-101	100PF	50V	CERAMIC	
	C862	QETB1CM-107	100MF	16V	ELECTRO	
	C863	QFV81HJ-473	0.047MF	50V	T.FILM	
	C864	QETB1EM-106	10MF	25V	ELECTRO	
	C865	QETB1HM-105	1MF	50V	ELECTRO	
	C871	QFLC1HK-392	3900PF	50V	CERAMIC	
	C872	QFLC1HK-392	3900PF	50V	CERAMIC	
	C873	QFLC1HK-683	0.068MF	50V	CERAMIC	
	C874	QFLC1HK-683	0.068MF	50V	CERAMIC	
	C875	QFLC1HK-103	0.01MF	50V	CERAMIC	
	C876	QFLC1HK-103	0.01MF	50V	CERAMIC	
	C877	QFLC1HK-222	2200PF	50V	CERAMIC	
	C878	QFLC1HK-222	2200PF	50V	CERAMIC	
	C879	QETB1EM-106	10MF	25V	ELECTRO	
	C880	QETB1EM-106	10MF	25V	ELECTRO	
	C881	QFLC1HK-562	5600PF	50V	CERAMIC	
	C882	QFLC1HK-562	5600PF	50V	CERAMIC	
	C883	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C884	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C885	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C886	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C887	QFLC1HK-102	1000PF	50V	CERAMIC	
	C893	QETB0JM-227	220MF	6.3V	ELECTRO	
	C894	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C895	QFLC1HK-124	0.12MF	50V	CERAMIC	
	C896	QETB1AM-107	100MF	10V	ELECTRO	
	C901	QCBB1HK-101	100PF	50V	CERAMIC	
	C902	QETB1AM-107	100MF	10V	ELECTRO	
	C903	QEK61HM-226	22MF	50V	ELECTRO	

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C904	QETB1HM-475	4.7MF	50V	ELECTRO	
	C905	QETB1HM-475	4.7MF	50V	ELECTRO	
	C906	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C907	QETB1AM-227	220MF	10V	ELECTRO	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R701	PTH61G25AR4R7M			FUSIBLE	
⚠	R702	PTH61G25AR4R7M			FUSIBLE	
⚠	R703	QRZ0062-100	10	1/4W	FUSIBLE	
⚠	R704	QRZ0062-100	10	1/4W	FUSIBLE	
	R705	QRD167J-472	4.7K	1/6W	CARBON	
	R706	QRD167J-472	4.7K	1/6W	CARBON	
	R708	QRD167J-391	390	1/6W	CARBON	
	R711	QRD167J-183	18K	1/6W	CARBON	
	R712	QRD167J-432	4.3K	1/6W	CARBON	
	R713	QRD167J-391	390	1/6W	CARBON	
	R714	QRD167J-221	220	1/6W	CARBON	
	R715	QRD167J-152	1.5K	1/6W	CARBON	
	R716	QRD167J-561	560	1/6W	CARBON	
	R717	QRD167J-561	560	1/6W	CARBON	
	R718	QRD167J-562	5.6K	1/6W	CARBON	
	R719	QRD167J-152	1.5K	1/6W	CARBON	
	R720	QRD167J-271	270	1/6W	CARBON	
	R721	QRD167J-471	470	1/6W	CARBON	
	R722	QRD167J-472	4.7K	1/6W	CARBON	
	R723	QRD167J-154	150K	1/6W	CARBON	
	R724	QRD167J-562	5.6K	1/6W	CARBON	
	R725	QRD167J-103	10K	1/6W	CARBON	
	R726	QRD167J-104	100K	1/6W	CARBON	
	R727	QRD167J-183	18K	1/6W	CARBON	
	R728	QRD167J-562	5.6K	1/6W	CARBON	
	R731	QRD167J-104	100K	1/6W	CARBON	
	R732	QRD167J-104	100K	1/6W	CARBON	
	R733	QRD167J-394	390K	1/6W	CARBON	
	R734	QRD167J-394	390K	1/6W	CARBON	
	R735	QRD167J-121	120	1/6W	CARBON	
	R736	QRD167J-182	1.8K	1/6W	CARBON	
	R737	QRD167J-681	680	1/6W	CARBON	
	R738	QRD167J-473	47K	1/6W	CARBON	
	R739	QRD167J-331	330	1/6W	CARBON	
	R740	QRD167J-333	33K	1/6W	CARBON	
	R741	QRD167J-273	27K	1/6W	CARBON	
	R742	QRD167J-394	390K	1/6W	CARBON	
	R743	QRD167J-105	1M	1/6W	CARBON	
	R744	QRD167J-470	47	1/6W	CARBON	
	R745	QRD167J-473	47K	1/6W	CARBON	
	R746	QRD167J-272	2.7K	1/6W	CARBON	
	R747	QRD167J-682	6.8K	1/6W	CARBON	
	R748	QRD167J-104	100K	1/6W	CARBON	
	R749	QRD167J-562	5.6K	1/6W	CARBON	
	R750	QRD167J-105	1M	1/6W	CARBON	
	R751	QRD167J-105	1M	1/6W	CARBON	
	R752	QRD167J-104	100K	1/6W	CARBON	
	R753	QRD167J-562	5.6K	1/6W	CARBON	
	R754	QRD167J-104	100K	1/6W	CARBON	
	R755	QRD167J-103	10K	1/6W	CARBON	
	R756	QRD167J-470	47	1/6W	CARBON	
	R757	QRD167J-183	18K	1/6W	CARBON	
	R758	QRD167J-183	18K	1/6W	CARBON	
	R761	QRD167J-564	560K	1/6W	CARBON	
	R762	QRD167J-224	220K	1/6W	CARBON	
	R763	QRD167J-393	39K	1/6W	CARBON	
	R764	QRD167J-224	220K	1/6W	CARBON	
	R765	QRD167J-562	5.6K	1/6W	CARBON	
	R766	QRD167J-392	3.9K	1/6W	CARBON	
	R768	QRD167J-103	10K	1/6W	CARBON	
	R769	QRD167J-102	1K	1/6W	CARBON	
	R770	QRD167J-471	470	1/6W	CARBON	
	R771	QRD167J-683	68K	1/6W	CARBON	
	R772	QRD167J-183	18K	1/6W	CARBON	
	R773	QRD167J-273	27K	1/6W	CARBON	
	R774	QRD167J-470	47	1/6W	CARBON	
	R775	QRD167J-335	3.3M	1/6W	CARBON	
	R781	QRD167J-684	680K	1/6W	CARBON	
	R782	QRD167J-684	680K	1/6W	CARBON	
	R783	QRD167J-823	82K	1/6W	CARBON	
	R784	QRD167J-470	47	1/6W	CARBON	
	R785	QRD167J-683	68K	1/6W	CARBON	
	R786	QRD167J-123	12K	1/6W	CARBON	
	R787	QRD167J-152	1.5K	1/6W	CARBON	
	R788	QRD167J-2R2	2.2	1/6W	CARBON	
	R791	QRD167J-513	51K	1/6W	CARBON	
	R792	QRD167J-513	51K	1/6W	CARBON	
	R793	QRD167J-683	68K	1/6W	CARBON	
	R794	QRD167J-513	51K	1/6W	CARBON	
	R795	QRD167J-221	220	1/6W	CARBON	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R799	QRD167J-220	22	1/6W	CARBON	
	R801	QRD167J-563	56K	1/6W	CARBON	
	R802	QRD167J-563	56K	1/6W	CARBON	
	R804	QRD167J-681	680	1/6W	CARBON	
	R805	QVPA601-202A	2K		VARIABLE	
	R806	QRD167J-561	560	1/6W	CARBON	
	R807	QRD167J-334	330K	1/6W	CARBON	
	R808	QRD167J-222	2.2K	1/6W	CARBON	
	R809	QVPA601-154A	150K		VARIABLE	
	R810	QRD167J-223	22K	1/6W	CARBON	
	R811	QRD167J-682	6.8K	1/6W	CARBON	
	R812	QRD167J-103	10K	1/6W	CARBON	
	R813	QRD167J-562	5.6K	1/6W	CARBON	
	R814	QRD167J-562	5.6K	1/6W	CARBON	
	R815	QRD167J-562	5.6K	1/6W	CARBON	
	R816	QRD167J-562	5.6K	1/6W	CARBON	
	R817	QRD167J-183	18K	1/6W	CARBON	
	R819	QRD167J-103	10K	1/6W	CARBON	
	R820	QRD167J-224	220K	1/6W	CARBON	
	R821	QRD167J-103	10K	1/6W	CARBON	
	R822	QRD167J-183	18K	1/6W	CARBON	
	R823	QRD167J-434	430K	1/6W	CARBON	
	R824	QRD167J-434	430K	1/6W	CARBON	
	R825	QRD167J-103	10K	1/6W	CARBON	
	R827	QRD167J-104	100K	1/6W	CARBON	
	R828	QRD167J-104	100K	1/6W	CARBON	
	R829	QRD167J-681	680	1/6W	CARBON	
	R830	QRD167J-183	18K	1/6W	CARBON	
	R831	QRD167J-104	100K	1/6W	CARBON	
	R832	QRD167J-102	1K	1/6W	CARBON	
	R833	QRD167J-562	5.6K	1/6W	CARBON	
	R834	QRD167J-183	18K	1/6W	CARBON	
	R835	QRD167J-183	18K	1/6W	CARBON	
	R836	QRD167J-394	390K	1/6W	CARBON	
	R837	QRD167J-470	47	1/6W	CARBON	
	R838	QRD167J-562	5.6K	1/6W	CARBON	
	R839	QRD167J-183	18K	1/6W	CARBON	
	R841	QRD167J-682	6.8K	1/6W	CARBON	
	R842	QRD167J-181	180	1/6W	CARBON	
	R843	QRD167J-331	330	1/6W	CARBON	
	R844	QRD167J-272	2.7K	1/6W	CARBON	
	R845	QRD167J-471	470	1/6W	CARBON	
	R846	QRD167J-101	100	1/6W	CARBON	
⚠	R847	QRV144F-1602	16K	1/4W	M.FILM	
⚠	R848	QRV144F-1502	15K	1/4W	M.FILM	
	R849	QRD167J-183	18K	1/6W	CARBON	
	R851	QRD167J-183	18K	1/6W	CARBON	
	R852	QRD167J-102	1K	1/6W	CARBON	
	R853	QRD167J-152	1.5K	1/6W	CARBON	
	R854	QRD167J-104	100K	1/6W	CARBON	
	R855	QRD167J-821	820	1/6W	CARBON	
	R857	QRD167J-471	470	1/6W	CARBON	
	R858	QRD167J-682	6.8K	1/6W	CARBON	
	R859	QRD167J-105	1M	1/6W	CARBON	
	R861	QRD167J-103	10K	1/6W	CARBON	
	R862	QRD167J-272	2.7K	1/6W	CARBON	
	R863	QRD167J-102	1K	1/6W	CARBON	
	R864	QRD167J-271	270	1/6W	CARBON	
	R865	QRD167J-103	10K	1/6W	CARBON	
	R866	QRD167J-562	5.6K	1/6W	CARBON	
	R867	QRD167J-472	4.7K	1/6W	CARBON	
	R868	QRD167J-822	8.2K	1/6W	CARBON	
	R869	QRD167J-103	10K	1/6W	CARBON	
	R870	QRD167J-101	100	1/6W	CARBON	
	R871	QRD167J-222	2.2K	1/6W	CARBON	
	R872	QRD167J-222	2.2K	1/6W	CARBON	
	R873	QRD167J-751	750	1/6W	CARBON	
	R874	QRD167J-751	750	1/6W	CARBON	
	R875	QRD167J-471	470	1/6W	CARBON	
	R876	QRD167J-471	470	1/6W	CARBON	
	R877	QRD167J-221	220	1/6W	CARBON	
	R878	QRD167J-221	220	1/6W	CARBON	
	R879	QRD167J-105	1M	1/6W	CARBON	
	R880	QRD167J-105	1M	1/6W	CARBON	
	R881	QRD167J-392	3.9K	1/6W	CARBON	
	R882	QRD167J-392	3.9K	1/6W	CARBON	
	R883	QRD167J-821	820	1/6W	CARBON	
	R884	QRD167J-821	820	1/6W	CARBON	
	R885	QRD167J-821	820	1/6W	CARBON	
	R886	QRD167J-821	820	1/6W	CARBON	
	R887	QRD167J-272	2.7K	1/6W	CARBON	
	R888	QRD167J-272	2.7K	1/6W	CARBON	
	R889	QRD167J-273	27K	1/6W	CARBON	
	R890	QRD167J-273	27K	1/6W	CARBON	
	R891	QRD167J-561	560	1/6W	CARBON	
	R892	QRD167J-561	560	1/6W	CARBON	
	R893	QRD167J-104	100K	1/6W	CARBON	
	R894	QRD167J-105	1M	1/6W	CARBON	
	R895	QRD167J-681	680	1/6W	CARBON	
	R901	QRD167J-472	4.7K	1/6W	CARBON	
	R902	QRD167J-103	10K	1/6W	CARBON	
	R903	QRD167J-471	470	1/6W	CARBON	
	R904	QRD167J-105	1M	1/6W	CARBON	
	R905	QRD167J-183	18K	1/6W	CARBON	
	R906	QRD167J-103	10K	1/6W	CARBON	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R907	QRD167J-472	4.7K 1/6W CARBON	
	RA801	QRB045J-472	4.7K 1/8W R.NETWORK	
	RA871	QRB055J-224	220K 1/8W R.NETWORK	
	RA901	QRB045J-473	47K 1/8W R.NETWORK	

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E12185-002	CIRCUIT BOARD	
		E306708-001	HOLDER	
		E3400-419	FELT SPACER	
		E70859-001	EARTH PLATE	
	J201	VMC0107-009	CONNECTOR	
	J401	VMC0107-005	CONNECTOR	
	J911	VMC0107-009	CONNECTOR	
	J913	VMC0107-008	CONNECTOR	
	L841	ENZ3001-002	OSCILLATOR COIL	
	P701	EMV5109-010A	PLUG ASSY	

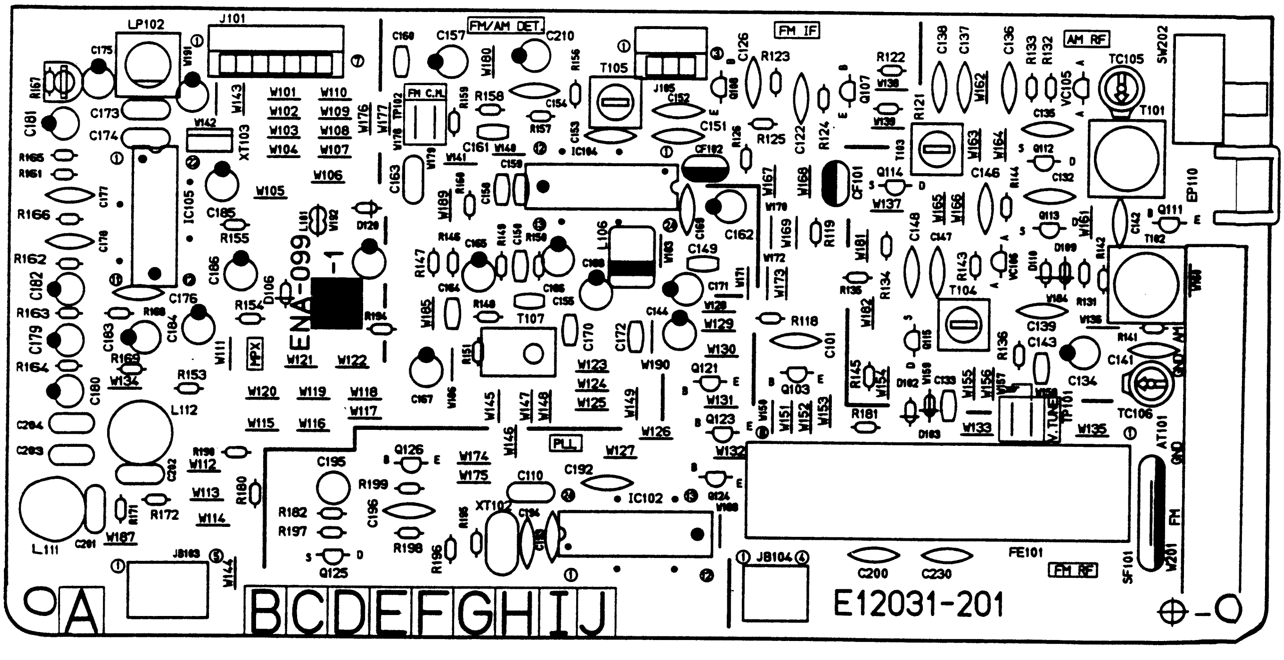
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	P702	EMV5109-004A	PLUG ASSY	
	P703	EMV5109-006A	PLUG ASSY	
	P704	EMV5133-006K	PLUG ASSY	
	S901	ESP0001-018	TACT SWITCH	
	S902	ESP0001-018	TACT SWITCH	
	S903	ESP0001-018	TACT SWITCH	
	S904	ESP0001-018	TACT SWITCH	
	S905	ESP0001-018	TACT SWITCH	
	S906	ESP0001-018	TACT SWITCH	
	S907	ESP0001-018	TACT SWITCH	
	S908	ESP0001-018	TACT SWITCH	
	S909	ESP0001-018	TACT SWITCH	
	S910	ESP0001-018	TACT SWITCH	
	S911	ESP0001-018	TACT SWITCH	
	CF841	ECX0086-436EM	RESONATOR	
	CF901	ECX0004-194KM	RESONATOR	
	FL901	ELU0001-091	FL TUBE	
	FW911	EWR39B-16LST	FLAT WIRE	
	FW913	EWR38B-20LST	FLAT WIRE	

■ENA-099☐ Tuner PC Board Ass'y

Note: ENA-099☐ varies according to the areas employed . See note (1) when placing an order.

[Except Switzerland (withe LW) , West Germany (with LW) ,Italy (with LW)]



Note (1)

PC Board Ass'y	Designated Areas
ENA-099B	Other Countries
ENA-099C	Australia
ENA-099D	Continental Europe (with LW)
ENA-099F	the U.K.(with LW)

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q103	2SC461(B,C)	SILICON HITACHI	
	Q107	2SC535(B,C)	SILICON HITACHI	
	Q108	2SC461(B,C)	SILICON HITACHI	
	Q111	2SD2144S(VW)	SILICON ROHM	D
	Q111	2SD2144S(VW)	SILICON ROHM	F
	Q112	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q113	2SK301(Q,R)	F.E.T MATSUSHITA	D
	Q113	2SK301(Q,R)	F.E.T MATSUSHITA	F
	Q114	2SK301(P,Q)	F.E.T MATSUSHITA	D
	Q114	2SK301(P,Q)	F.E.T MATSUSHITA	F
	Q115	2SK301(P,Q)	F.E.T MATSUSHITA	D
	Q115	2SK301(P,Q)	F.E.T MATSUSHITA	F
	Q121	DTA114YS	SILICON ROHM	D
	Q121	DTA114YS	SILICON ROHM	F
	Q123	DTA114YS	SILICON ROHM	
	Q124	DTA114YS	SILICON ROHM	
	Q125	2SK301(Q2)	F.E.T MATSUSHITA	
	Q126	2SC458(D)	SILICON HITACHI	

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC102	LC7218	I.C. SANYO	
	IC104	LA1266A	I.C. SANYO	
	IC105	LA3401	I.C. SANYO	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D102	1SS133	SILICON ROHM	D
	D102	1SS133	SILICON ROHM	F
	D103	1SS133	SILICON ROHM	D
	D103	1SS133	SILICON ROHM	F
	D106	1SS133	SILICON ROHM	
	D109	1SS133	SILICON ROHM	D
	D109	1SS133	SILICON ROHM	F
	D110	1SS133	SILICON ROHM	D
	D110	1SS133	SILICON ROHM	F
	D120	1SS133	SILICON ROHM	
	VC105	SVC342(L)	VARICAP SANYO	
	VC106	SVC342(L)	VARICAP SANYO	D
	VC106	SVC342(L)	VARICAP SANYO	F

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C101	QCF21HP-223	0.022MF 50V CERAMIC	
	C110	QCZ0205-155	1.5MF 25V CERAMIC	
	C122	QCF21HP-223	0.022MF 50V CERAMIC	
	C126	QCF21HP-223	0.022MF 50V CERAMIC	
	C132	QCS21HJ-561	560PF 50V CERAMIC	
	C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C134	QETB1EM-106	10MF 25V ELECTRO	
	C135	QCC21EM-223	0.022MF 25V CERAMIC	
	C136	QCT26CH-180	18PF 50V CERAMIC	
	C137	QCT26CH-221	220PF 50V CERAMIC	
	C138	QCT26CH-241	240PF 50V CERAMIC	
	C139	QCC21EM-223	0.022MF 25V CERAMIC	D
	C139	QCC21EM-223	0.022MF 25V CERAMIC	F
	C141	QCS21HJ-270	27PF 50V CERAMIC	D
	C141	QCS21HJ-270	27PF 50V CERAMIC	F
	C142	QCY21HK-272	2700PF 50V CERAMIC	D
	C142	QCY21HK-272	2700PF 50V CERAMIC	F
	C143	QCHB1EZ-223	0.022MF 25V CERAMIC	D
	C143	QCHB1EZ-223	0.022MF 25V CERAMIC	F
	C144	QETB1EM-106	10MF 25V ELECTRO	D
	C144	QETB1EM-106	10MF 25V ELECTRO	F
	C146	QCT26CH-680	68PF 50V CERAMIC	D
	C146	QCT26CH-680	68PF 50V CERAMIC	F
	C147	QCT26CH-220	22PF 50V CERAMIC	D
	C147	QCT26CH-220	22PF 50V CERAMIC	F
	C148	QCT26CH-121	120PF 50V CERAMIC	D
	C148	QCT26CH-121	120PF 50V CERAMIC	F
	C149	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C150	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C151	QCF21HP-223	0.022MF 50V CERAMIC	
	C152	QCF21HP-223	0.022MF 50V CERAMIC	
	C153	QCC21EM-223	0.022MF 25V CERAMIC	
	C154	QCF21HP-223	0.022MF 50V CERAMIC	
	C155	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C157	QETB1HM-474	0.47MF 50V ELECTRO	
	C158	QCBB1HK-101	100PF 50V CERAMIC	
	C159	QCBB1HK-101	100PF 50V CERAMIC	
	C160	QCBB1HK-221	220PF 50V CERAMIC	B
	C160	QCBB1HK-221	220PF 50V CERAMIC	C
	C160	QCBB1HK-101	100PF 50V CERAMIC	D
	C160	QCBB1HK-101	100PF 50V CERAMIC	F
	C161	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C162	QETB1EM-106	10MF 25V ELECTRO	
	C163	QCY21HK-102	1000PF 50V CERAMIC	
	C164	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C165	QETB1HM-474	0.47MF 50V ELECTRO	
	C166	QETB1HM-225	2.2MF 50V ELECTRO	
	C167	QETB1HM-225	2.2MF 50V ELECTRO	
	C168	QETB1HM-475	4.7MF 50V ELECTRO	
	C169	QCF21HP-223	0.022MF 50V CERAMIC	
	C170	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C171	QETB1EM-106	10MF 25V ELECTRO	
	C172	QCVB1CM-103	0.01MF 16V CERAMIC	
	C173	QFLC1HK-393	0.039MF 50V CERAMIC	B
	C173	QFLC1HK-223	0.022MF 50V CERAMIC	C
	C173	QFLC1HK-223	0.022MF 50V CERAMIC	D
	C173	QFLC1HK-223	0.022MF 50V CERAMIC	F
	C174	QFLC1HK-473	0.047MF 50V CERAMIC	
	C175	QETB1EM-106	10MF 25V ELECTRO	
	C176	QCY21HK-102	1000PF 50V CERAMIC	
	C177	QCS21HJ-821	820PF 50V CERAMIC	B
	C177	QCS21HJ-391	390PF 50V CERAMIC	C
	C177	QCS21HJ-391	390PF 50V CERAMIC	D
	C177	QCS21HJ-561	560PF 50V CERAMIC	F
	C178	QCS21HJ-821	820PF 50V CERAMIC	B
	C178	QCS21HJ-391	390PF 50V CERAMIC	C
	C178	QCS21HJ-391	390PF 50V CERAMIC	D
	C178	QCS21HJ-561	560PF 50V CERAMIC	F
	C179	QETB1HM-225	2.2MF 50V ELECTRO	
	C180	QETB1HM-225	2.2MF 50V ELECTRO	
	C181	QETB1EM-106	10MF 25V ELECTRO	
	C182	QETB1HM-225	2.2MF 50V ELECTRO	
	C183	QETB1HM-105	1MF 50V ELECTRO	
	C184	QETB1HM-105	1MF 50V ELECTRO	
	C185	QETB1HM-225	2.2MF 50V ELECTRO	
	C186	QETB1HM-474	0.47MF 50V ELECTRO	
	C192	QCC21EM-473	0.047MF 25V CERAMIC	
	C193	QCS21HJ-180	18PF 50V CERAMIC	
	C194	QCS21HJ-180	18PF 50V CERAMIC	
	C195	QEN51HM-474	0.47MF 50V NON POLE	
	C196	QCY21HK-102	1000PF 50V CERAMIC	
	C200	QCF21HP-103	0.01MF 50V CERAMIC	
	C201	QCY21HK-332	3300PF 50V CERAMIC	
	C202	QCY21HK-332	3300PF 50V CERAMIC	
	C203	QCY21HK-182	1800PF 50V CERAMIC	
	C204	QCY21HK-182	1800PF 50V CERAMIC	
	C210	QETB1CM-227	220MF 16V ELECTRO	
	C230	QCF21HP-103	0.01MF 50V CERAMIC	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R118	QRD167J-332	3.3K 1/6W CARBON	
	R119	QRD167J-221	220 1/6W CARBON	
	R121	QRD167J-391	390 1/6W CARBON	
	R122	QRD167J-272	2.7K 1/6W CARBON	
	R123	QRD167J-102	1K 1/6W CARBON	
	R124	QRD167J-681	680 1/6W CARBON	
	R125	QRD167J-332	3.3K 1/6W CARBON	
	R126	QRD167J-221	220 1/6W CARBON	
	R131	QRD167J-331	330 1/6W CARBON	
	R132	QRD167J-103	10K 1/6W CARBON	
	R133	QRD167J-473	47K 1/6W CARBON	
	R134	QRD167J-103	10K 1/6W CARBON	D
	R134	QRD167J-103	10K 1/6W CARBON	F
	R135	QRD167J-470	47 1/6W CARBON	
	R136	QRD167J-103	10K 1/6W CARBON	
	R141	QRD167J-472	4.7K 1/6W CARBON	D
	R141	QRD167J-472	4.7K 1/6W CARBON	F
	R142	QRD167J-331	330 1/6W CARBON	D
	R142	QRD167J-331	330 1/6W CARBON	F
	R143	QRD167J-103	10K 1/6W CARBON	D
	R143	QRD167J-103	10K 1/6W CARBON	F
	R144	QRD167J-473	47K 1/6W CARBON	D
	R144	QRD167J-473	47K 1/6W CARBON	F
	R145	QRD167J-103	10K 1/6W CARBON	D
	R145	QRD167J-103	10K 1/6W CARBON	F
	R146	QRD167J-560	56 1/6W CARBON	
	R147	QRD167J-103	10K 1/6W CARBON	
	R148	QRD167J-103	10K 1/6W CARBON	
	R149	QRD167J-223	22K 1/6W CARBON	
	R150	QRD167J-103	10K 1/6W CARBON	
	R151	QRD167J-222	2.2K 1/6W CARBON	
	R153	QRD167J-103	10K 1/6W CARBON	
	R154	QRD167J-103	10K 1/6W CARBON	
	R155	QRD167J-562	5.6K 1/6W CARBON	
	R156	QRD167J-682	6.8K 1/6W CARBON	
	R157	QRD167J-103	10K 1/6W CARBON	
	R158	QRD167J-273	27K 1/6W CARBON	
	R159	QRD167J-561	560 1/6W CARBON	
	R160	QRD167J-562	5.6K 1/6W CARBON	B
	R160	QRD167J-183	18K 1/6W CARBON	C
	R160	QRD167J-183	18K 1/6W CARBON	D
	R160	QRD167J-822	8.2K 1/6W CARBON	F
	R161	QRD167J-823	82K 1/6W CARBON	B
	R161	QRD167J-124	120K 1/6W CARBON	C
	R161	QRD167J-124	120K 1/6W CARBON	D
	R161	QRD167J-823	82K 1/6W CARBON	F
	R162	QRD167J-823	82K 1/6W CARBON	B
	R162	QRD167J-124	120K 1/6W CARBON	C
	R162	QRD167J-124	120K 1/6W CARBON	D
	R162	QRD167J-823	82K 1/6W CARBON	F

Resistors

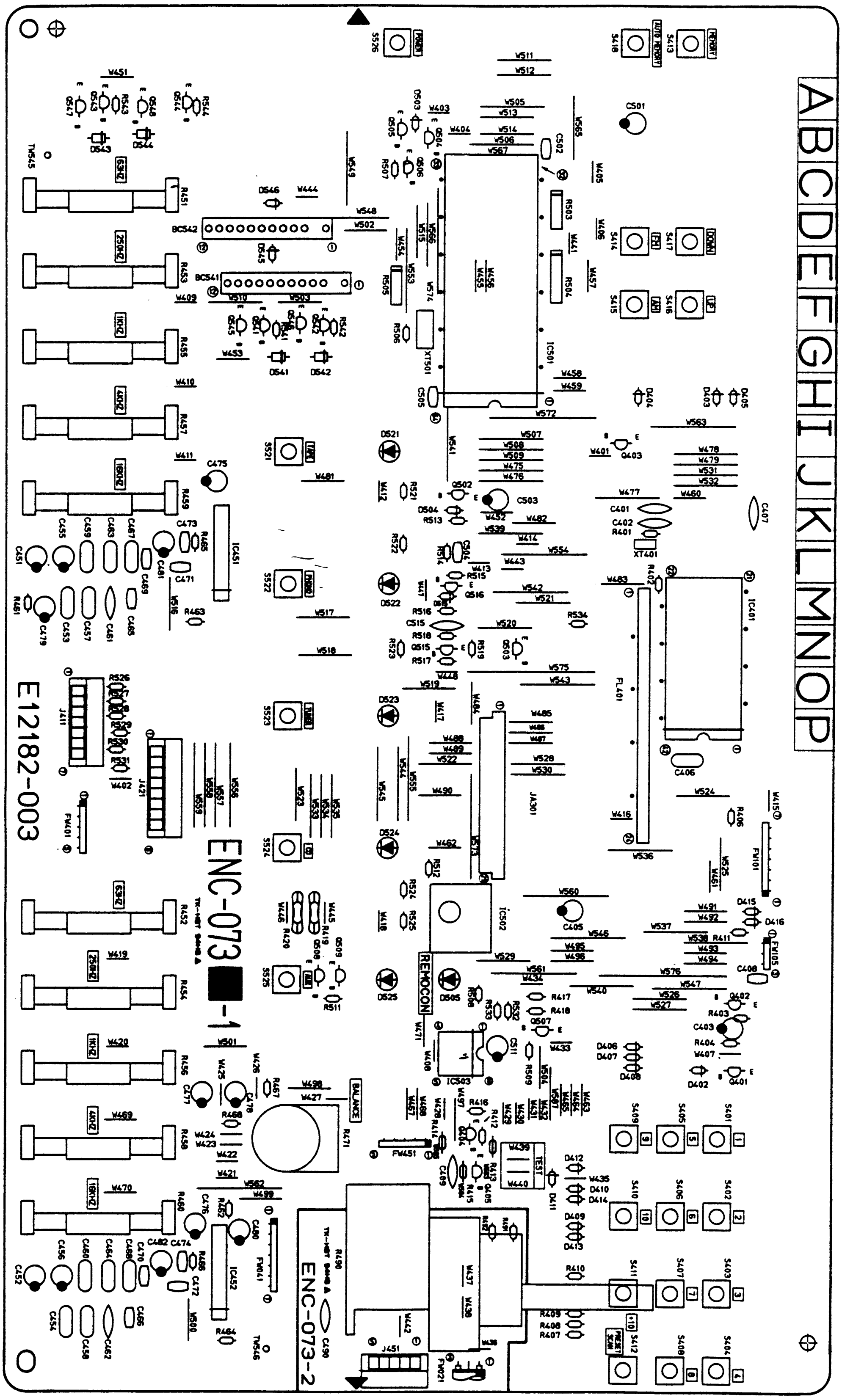
⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R163	QRD167J-472	4.7K 1/6W CARBON	B
	R163	QRD167J-392	3.9K 1/6W CARBON	C
	R163	QRD167J-392	3.9K 1/6W CARBON	D
	R163	QRD167J-392	3.9K 1/6W CARBON	F
	R164	QRD167J-472	4.7K 1/6W CARBON	B
	R164	QRD167J-392	3.9K 1/6W CARBON	C
	R164	QRD167J-392	3.9K 1/6W CARBON	D
	R164	QRD167J-392	3.9K 1/6W CARBON	F
	R165	QRD167J-184	180K 1/6W CARBON	B
	R165	QRD167J-274	270K 1/6W CARBON	C
	R165	QRD167J-274	270K 1/6W CARBON	D
	R165	QRD167J-274	270K 1/6W CARBON	F
	R166	QRD167J-184	180K 1/6W CARBON	B
	R166	QRD167J-274	270K 1/6W CARBON	C
	R166	QRD167J-274	270K 1/6W CARBON	D
	R166	QRD167J-274	270K 1/6W CARBON	F
	R167	QRD167J-393	39K 1/6W CARBON	B
	R167	QRD167J-473	47K 1/6W CARBON	C
	R167	QRD167J-473	47K 1/6W CARBON	D
	R167	QRD167J-473	47K 1/6W CARBON	F
	R168	QRD167J-103	10K 1/6W CARBON	
	R169	QRD167J-103	10K 1/6W CARBON	
	R171	QRD167J-682	6.8K 1/6W CARBON	
	R172	QRD167J-682	6.8K 1/6W CARBON	
	R180	QRD167J-472	4.7K 1/6W CARBON	
	R181	QRD167J-222	2.2K 1/6W CARBON	
	R182	QRD167J-181	180 1/6W CARBON	
	R190	QRD167J-472	4.7K 1/6W CARBON	
	R194	QRD167J-472	4.7K 1/6W CARBON	
	R195	QRD167J-473	47K 1/6W CARBON	
	R196	QRD167J-103	10K 1/6W CARBON	B
	R196	QRD167J-103	10K 1/6W CARBON	C
	R196	QRD167J-222	2.2K 1/6W CARBON	D
	R196	QRD167J-222	2.2K 1/6W CARBON	F
	R197	QRD167J-222	2.2K 1/6W CARBON	
	R198	QRD167J-332	3.3K 1/6W CARBON	B
	R198	QRD167J-332	3.3K 1/6W CARBON	C
	R198	QRD167J-822	3.2K 1/6W CARBON	D
	R198	QRD167J-822	8.2K 1/6W CARBON	F
	R199	QRD167J-472	4.7K 1/6W CARBON	

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E12031-201(S)	CIRCUIT BOARD	
	J101	EMV7112-C07	CONNECTOR	
	J105	EMV7112-003	CONNECTOR	B
	L106	EQL3001-102K	INDUCTOR	
	L111	EQL2103-393	INDUCTOR	
	L112	EQL2103-393	INDUCTOR	
	T101	EQR1111-014	AM RF COIL	
	T102	EQR1111-005	AM RF COIL	D
	T102	EQR1111-005	AM RF COIL	F
	T103	EQR1207-015	MW OSC COIL	
	T104	EQR1307-009	LW OSC COIL	D
	T104	EQR1307-009	LW OSC COIL	F
	T105	EQT2140-017	I.F. TRANSFORMER	
	T107	ECB1560-008	CERAMIC FILTER	
	AT101	EMB90YV-401K	ANTENNA TERMINAL	
	CF101	ECB2123-001R	CERAMIC FILTER	B
	CF101	ECB2123-001R	CERAMIC FILTER	C
	CF101	ECB2118-006R	CERAMIC FILTER	D
	CF101	ECB2118-006R	CERAMIC FILTER	F
	CF102	ECB2123-001R	CERAMIC FILTER	B
	CF102	ECB2123-001R	CERAMIC FILTER	C
	CF102	ECB2118-006R	CERAMIC FILTER	D
	CF102	ECB2118-006R	CERAMIC FILTER	F
	EP110	E70225-001	EARTH PLATE	
	FE101	EAF2203-001	FRONT END	
	JB103	EMV7125-005R	CONNECTOR	
	JB104	EMV7125-004R	CONNECTOR	
	SW202	QSS6A12-E01	SLIDE SWITCH	B
	TC105	ENZ1003-006	TRIMMER	
	TC106	ENZ1003-006	TRIMMER	D
	TC106	ENZ1003-006	TRIMMER	F
	XT102	ECX0007-200KC	RESONATOR	
	XT103	ECX0000-456KR	RESONATOR	

■ ENC-073 ☐ System Control and FL Display PC Board Ass'y

Note: ENC-073 ☐ varies according to the areas employed . See note (1) when placing an order.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E12182-003
ENC-073■-1
ENC-073-2
REMOCON
BALANCE
TEST
IC501
IC401
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FL401
JA301
J411
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BC541
BC542
XT501
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S415
S416
S417
S418
S521
S522
S523
S524
S525
S526
63Hz
250Hz
1kHz
4kHz
16kHz
+10
PRESET SCAN
AUTO MEMORY
MEMORY
DOWN
UP
POWER

Note (1)

PC Board Ass'y	Designated Areas
ENC-073 [A]	Other Countries
ENC-073 [B]	Australia
ENC-073 [C]	Continental Europe (with LW), the U.K.(with LW), Switzerland (with LW), West Germany (with LW)
ENC-073 [D]	Italy (with LW)

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q401	DTC144ES	SILICON ROHM	
	Q402	DTC114YS	SILICON ROHM	
	Q403	DTA144ES	SILICON ROHM	
	Q404	2SC1740S(R,S)	SILICON ROHM	
	Q502	DTC114YS	SILICON ROHM	
	Q503	DTA144ES	SILICON ROHM	
	Q504	DTC144ES	SILICON ROHM	
	Q505	DTC144ES	SILICON ROHM	
	Q506	DTC144ES	SILICON ROHM	
	Q507	DTC144ES	SILICON ROHM	
	Q508	DTC144ES	SILICON ROHM	
	Q509	DTC114YS	SILICON ROHM	
	Q541	2SC3377(Q,R)	SILICON ROHM	
	Q542	2SC3377(Q,R)	SILICON ROHM	
	Q543	2SC3377(Q,R)	SILICON ROHM	
	Q544	2SC3377(Q,R)	SILICON ROHM	
	Q545	DTC114TS	SILICON ROHM	
	Q546	DTC114TS	SILICON ROHM	
	Q547	DTC114TS	SILICON ROHM	
	Q548	DTC114TS	SILICON ROHM	

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC401	LC6514B-4245	I.C. SANYO	
	IC451	BA3812L	I.C. ROHM	
	IC452	BA3812L	I.C. ROHM	
	IC501	HD614081SB47	I.C. HITACHI	
	IC502	GP1U501X	I.C. SHARP	
	IC503	LB1639-CV	I.C. SANYO	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D402	1SS133	SILICON ROHM	
	D403	1SS133	SILICON ROHM	
	D404	1SS133	SILICON ROHM	
	D405	1SS133	SILICON ROHM	
	D406	1SS133	SILICON ROHM	
	D407	1SS133	SILICON ROHM	
	D408	1SS133	SILICON ROHM	
	D409	1SS133	SILICON ROHM	A
	D411	1SS133	SILICON ROHM	
	D412	1SS133	SILICON ROHM	C
	D412	1SS133	SILICON ROHM	D
	D413	1SS133	SILICON ROHM	D
	D414	1SS133	SILICON ROHM	
	D415	1SS133	SILICON ROHM	
	D416	1SS133	SILICON ROHM	
	D503	1SS133	SILICON ROHM	
	D504	1SS133	SILICON ROHM	
	D505	SLH-34VC50F124	L.E.D. ROHM	
	D521	SLH-34DC50F124	L.E.D. ROHM	
	D522	SLH-34DC50F124	L.E.D. ROHM	
	D523	SLH-34DC50F124	L.E.D. ROHM	
	D524	SLH-34DC50F124	L.E.D. ROHM	
	D525	SLH-34DC50F124	L.E.D. ROHM	
	D541	1SR139-200	SILICON ROHM	
	D542	1SR139-200	SILICON ROHM	
	D543	1SR139-200	SILICON ROHM	
	D544	1SR139-200	SILICON ROHM	
	D545	1SS133	SILICON ROHM	
	D546	1SS133	SILICON ROHM	

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C401	QCS21HJ-101	100PF 50V CERAMIC	
	C402	QCS21HJ-101	100PF 50V CERAMIC	
	C403	QEK61HM-105G	1MF 50V ELECTRO	
	C405	QER61CM-476	47MF 16V ELECTRO	
	C406	QCZ0205-155	1.5MF 25V CERAMIC	
	C407	QCF21HP-103	0.01MF 50V CERAMIC	
	C408	QCBB1HK-221	220P 50V CERAMIC	A
	C410	QCBB1HK-221	220P 50V CERAMIC	
	C451	QEK61HM-225G	2.2MF 50V ELECTRO	
	C452	QEK61HM-225G	2.2MF 50V ELECTRO	
	C453	QFLC1HK-273	0.027MF 50V CERAMIC	
	C454	QFLC1HK-273	0.027MF 50V CERAMIC	
	C455	QEK61HM-474G	0.47MF 50V ELECTRO	
	C456	QEK61HM-474G	0.47MF 50V ELECTRO	
	C457	QFLC1HK-822	8200PF 50V CERAMIC	
	C458	QFLC1HK-822	8200PF 50V CERAMIC	
	C459	QFLC1HK-124	0.12MF 50V CERAMIC	
	C460	QFLC1HK-124	0.12MF 50V CERAMIC	
	C461	QCY21HK-222	2200PF 50V CERAMIC	
	C462	QCY21HK-222	2200PF 50V CERAMIC	
	C463	QFLC1HK-333	0.033MF 50V CERAMIC	
	C464	QFLC1HK-333	0.033MF 50V CERAMIC	
	C465	QCBB1HK-471	470PF 50V CERAMIC	
	C466	QCBB1HK-471	470PF 50V CERAMIC	
	C467	QFLC1HK-822	8200PF 50V CERAMIC	
	C468	QFLC1HK-822	8200PF 50V CERAMIC	
	C469	QCBB1HK-121	120PF 50V CERAMIC	
	C470	QCBB1HK-121	120PF 50V CERAMIC	
	C471	QCBB1HK-471	470PF 50V CERAMIC	
	C472	QCBB1HK-471	470PF 50V CERAMIC	
	C473	QCBB1HK-101	100PF 50V CERAMIC	
	C474	QCBB1HK-101	100PF 50V CERAMIC	
	C475	QEK61HM-225G	2.2MF 50V ELECTRO	
	C476	QEK61HM-225G	2.2MF 50V ELECTRO	
	C477	QEK61CM-107	100MF 16V ELECTRO	
	C478	QEK61CM-107	100MF 16V ELECTRO	
	C479	QEK61HM-225G	2.2MF 50V ELECTRO	
	C480	QEK61HM-225G	2.2MF 50V ELECTRO	
	C481	QEK61CM-106G	10MF 16V ELECTRO	
	C482	QEK61CM-106G	10MF 16V ELECTRO	
	C490	QCF21HP-103	0.01MF 50V CERAMIC	
	C501	QEK61EM-476	47MF 25V ELECTRO	
	C502	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C503	QEK61EM-475G	4.7MF 25V ELECTRO	
	C504	QCVB1CM-103	0.01MF 16V CERAMIC	
	C505	QCVB1CM-103	0.01MF 16V CERAMIC	
	C511	QETB1CM-476	47MF 16V ELECTRO	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R401	QRD167J-105	1M 1/6W CARBON	
	R402	QRD167J-152	1.5K 1/6W CARBON	
	R403	QRD167J-392	3.9K 1/6W CARBON	
	R404	QRD167J-223	22K 1/6W CARBON	
	R406	QRD167J-472	4.7K 1/6W CARBON	
	R407	QRD167J-472	4.7K 1/6W CARBON	
	R408	QRD167J-472	4.7K 1/6W CARBON	
	R409	QRD167J-472	4.7K 1/6W CARBON	
	R410	QRD167J-472	4.7K 1/6W CARBON	
	R411	QRD167J-104	100K 1/6W CARBON	
	R412	QRD167J-103	10K 1/6W CARBON	
	R417	QRD167J-8R2	8.. 1/6W CARBON	
	R418	QRD167J-8R2	8.2 1/6W CARBON	
	R451	QVWB06W-E15C	100K VARIABLE	
	R452	QVWB06W-E15C	100K VARIABLE	
	R453	QVWB06W-E15C	100K VARIABLE	
	R454	QVWB06W-E15C	100K VARIABLE	
	R455	QVWB06W-E15C	100K VARIABLE	
	R456	QVWB06W-E15C	100K VARIABLE	
	R457	QVWB06W-E15C	100K VARIABLE	
	R458	QVWB06W-E15C	100K VARIABLE	
	R459	QVWB06W-E15C	100K VARIABLE	
	R460	QVWB06W-E15C	100K VARIABLE	
	R461	QRD167J-102	1K 1/6W CARBON	
	R462	QRD167J-102	1K 1/6W CARBON	
	R463	QRD167J-392	3.9K 1/6W CARBON	
	R464	QRD167J-392	3.9K 1/6W CARBON	
	R465	QRD167J-392	3.9K 1/6W CARBON	
	R466	QRD167J-392	3.9K 1/6W CARBON	
	R467	QRD167J-222	2.2K 1/6W CARBON	
	R468	QRD167J-222	2.2K 1/6W CARBON	
	R471	QVDA92W-E15B	100K VARIABLE	
	R490	QVDB91B-E15F	100K VARIABLE	
	R491	QRD167J-223	22K 1/6W CARBON	
	R492	QRD167J-223	22K 1/6W CARBON	
	R503	QRB049J-223	22K 1/10W R.NETWORK	
	R504	QRB069J-223	22K 1/10W R.NETWORK	
	R505	QRB049J-223	22K 1/10W R.NETWORK	
	R506	QRD167J-105	1M 1/6W CARBON	
	R507	QRD167J-103	10K 1/6W CARBON	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R508	QRD167J-221	220 1/6W CARBON	
	R509	QRD167J-103	10K 1/6W CARBON	
	R511	QRD167J-103	10K 1/6W CARBON	
	R512	QRD167J-102	1K 1/6W CARBON	
	R513	QRD167J-104	100K 1/6W CARBON	
	R514	QRD167J-223	22K 1/6W CARBON	
	R519	QRD167J-103	10K 1/6W CARBON	
	R521	QRD167J-151	150 1/6W CARBON	
	R522	QRD167J-151	150 1/6W CARBON	
	R523	QRD167J-151	150 1/6W CARBON	
	R524	QRD167J-151	150 1/6W CARBON	
	R525	QRD167J-151	150 1/6W CARBON	
	R526	QRD167J-221	220 1/6W CARBON	
	R527	QRD167J-221	220 1/6W CARBON	
	R528	QRD167J-221	220 1/6W CARBON	
	R529	QRD167J-391	390 1/6W CARBON	
	R530	QRD167J-221	220 1/6W CARBON	
	R531	QRD167J-221	220 1/6W CARBON	
	R532	QRD167J-222	2.2K 1/6W CARBON	
	R533	QRD167J-222	2.2K 1/6W CARBON	
	R534	QRD167J-472	4.7K 1/6W CARBON	
	R541	QRD167J-102	1K 1/6W CARBON	
	R542	QRD167J-102	1K 1/6W CARBON	
	R543	QRD167J-102	1K 1/6W CARBON	
	R544	QRD167J-102	1K 1/6W CARBON	

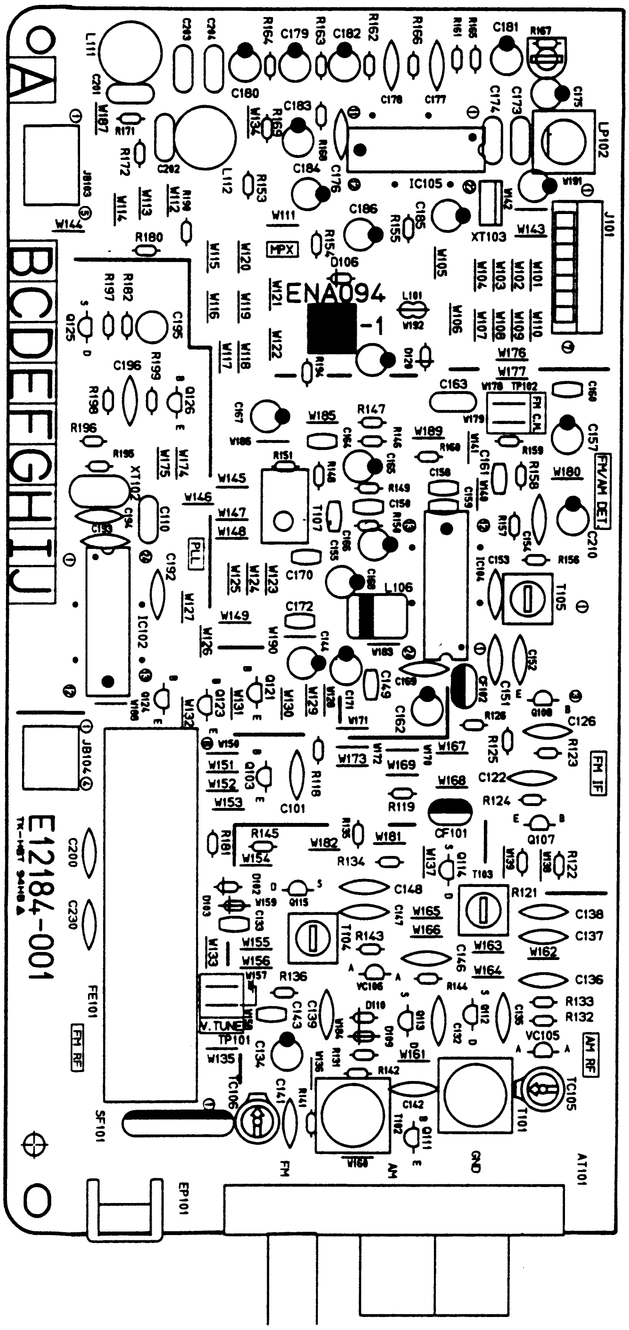
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E12182-003	CIRCUIT BOARD	
	J411	VMC0107-007	SOCKET	
	J421	VMC0107-008	CONNECTOR	
	J451	VMC0107-005	CONNECTOR	
	S401	ESP0001-018	TACT SWITCH	
	S402	ESP0001-018	TACT SWITCH	
	S403	ESP0001-018	TACT SWITCH	
	S404	ESP0001-018	TACT SWITCH	
	S405	ESP0001-018	TACT SWITCH	
	S406	ESP0001-018	TACT SWITCH	
	S407	ESP0001-018	TACT SWITCH	
	S408	ESP0001-018	TACT SWITCH	
	S409	ESP0001-018	TACT SWITCH	
	S410	ESP0001-018	TACT SWITCH	
	S411	ESP0001-018	TACT SWITCH	
	S412	ESP0001-018	TACT SWITCH	
	S413	ESP0001-018	TACT SWITCH	
	S414	ESP0001-018	TACT SWITCH	
	S415	ESP0001-018	TACT SWITCH	
	S416	ESP0001-018	TACT SWITCH	
	S417	ESP0001-018	TACT SWITCH	
	S418	ESP0001-018	TACT SWITCH	
	S521	ESP0001-018	TACT SWITCH	
	S522	ESP0001-018	TACT SWITCH	
	S523	ESP0001-018	TACT SWITCH	
	S524	ESP0001-018	TACT SWITCH	
	S525	ESP0001-018	TACT SWITCH	
	S526	ESP0001-018	TACT SWITCH	
	BC541	EWS20C-005	SOCKET WIRE	
	BC542	EWS20C-006	SOCKET WIRE	
	BK401	E75817-001	HOLDER	
	FL401	ELU0001-077	FL TUBE	
	FS401	E3400-439	SPACER	
	FW021	EWR23C-35JN	FLAT WIRE	
	FW041	EWR37B-30LST	FLAT WIRE	
	FW101	EWR37B-25KST	FLAT WIRE	
	FW105	EWR33B-30KST	FLAT WIRE	A
	FW401	EWR35B-30LST	FLAT WIRE	
	FW451	EWR35B-16LST	FLAT WIRE	
	JA301	EMV7123-029	CONNECTOR	
	TW545	EWT011-091	TERMINAL WIRE	
	TW546	EWT011-092	TERMINAL WIRE	
	XT401	ECX0001-000KS	RESONATOR	
	XT501	ECX0004-194KM	RESONATOR	

■ENA-094 ☐ Tuner PC Board Ass'y

Note: ENA-094☐ varies according to the areas employed . See note (1) when placing an order.

[Only for Switzerland (with LW) , West Germany (with LW) , Italy (with LW)]



Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q103	2SC461(B,C)	SILICON HITACHI	
	Q107	2SC535(B,C)	SILICON HITACHI	
	Q108	2SC461(B,C)	SILICON HITACHI	
	Q111	2SD2144S(VW)	SILICON ROHM	
	Q112	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q113	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q114	2SK301(P,Q)	F.E.T MATSUSHITA	
	Q115	2SK301(P,Q)	F.E.T MATSUSHITA	
	Q121	DTA114YS	SILICON ROHM	
	Q123	DTA114YS	SILICON ROHM	
	Q124	DTA114YS	SILICON ROHM	
	Q125	2SK301(Q2)	F.E.T MATSUSHITA	
	Q126	2SC458(D)	SILICON HITACHI	

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC102	LC7218	I.C. SANYO	
	IC104	LA1266A	I.C. SANYO	
	IC105	LA3401	I.C. SANYO	

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D102	1SS133	SILICON ROHM	
	D103	1SS133	SILICON ROHM	
	D106	1SS133	SILICON ROHM	
	D109	1SS133	SILICON ROHM	
	D110	1SS133	SILICON ROHM	
	D120	1SS133	SILICON ROHM	
	VC105	SVC342(L)	VARICAP SANYO	
	VC106	SVC342(L)	VARICAP SANYO	

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C101	QCF21HP-223	0.022MF 50V CERAMIC	
	C110	QCZ0205-155	1.5MF 25V CERAMIC	
	C122	QCF21HP-223	0.022MF 50V CERAMIC	
	C126	QCF21HP-223	0.022MF 50V CERAMIC	
	C132	QCS21HJ-561	560PF 50V CERAMIC	
	C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C134	QETB1EM-106	10MF 25V ELECTRO	
	C135	QCC21EM-223	0.022MF 25V CERAMIC	
	C136	QCT26CH-180	18PF 50V CERAMIC	
	C137	QCT26CH-221	220PF 50V CERAMIC	
	C138	QCT26CH-241	240PF 50V CERAMIC	
	C139	QCC21EM-223	0.022MF 25V CERAMIC	
	C141	QCS21HJ-270	27PF 50V CERAMIC	
	C142	QCY21HK-272	2700PF 50V CERAMIC	
	C143	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C144	QETB1EM-106	10MF 25V ELECTRO	
	C146	QCT26CH-680	68PF 50V CERAMIC	
	C147	QCT26CH-220	22PF 50V CERAMIC	
	C148	QCT26CH-121	120PF 50V CERAMIC	
	C149	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C150	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C151	QCF21HP-223	0.022MF 50V CERAMIC	
	C152	QCF21HP-223	0.022MF 50V CERAMIC	
	C153	QCC21EM-223	0.022MF 25V CERAMIC	
	C154	QCF21HP-223	0.022MF 50V CERAMIC	
	C155	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C157	QETB1HM-474	0.47MF 50V ELECTRO	
	C158	QCBB1HK-101	100PF 50V CERAMIC	
	C159	QCBB1HK-101	100PF 50V CERAMIC	
	C160	QCBB1HK-221	220PF 50V CERAMIC	A

Note (1)

PC Board Ass'y	Designated Areas
ENA-094 A	West Germany (with LW)
ENA-094 B	Italy (with LW)
ENA-094 C	Switzerland (with LW)

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C160	QCBB1HK-221	220PF 50V CERAMIC	B
	C160	QCBB1HK-101	100PF 50V CERAMIC	C
	C161	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C162	QETB1EM-106	10MF 25V ELECTRO	
	C163	QCY21HK-102	1000PF 50V CERAMIC	
	C164	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C165	QETB1HM-474	0.47MF 50V ELECTRO	
	C166	QETB1HM-225	2.2MF 50V ELECTRO	
	C167	QETB1HM-225	2.2MF 50V ELECTRO	
	C168	QETB1HM-475	4.7MF 50V ELECTRO	
	C169	QCF21HP-223	0.022MF 50V CERAMIC	
	C170	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C171	QETB1EM-106	10MF 25V ELECTRO	
	C172	QCVB1CM-103	0.01MF 16V CERAMIC	
	C173	QFLC1HK-223	0.022MF 50V CERAMIC	
	C174	QFLC1HK-473	0.047MF 50V CERAMIC	
	C175	QETB1EM-106	10MF 25V ELECTRO	
	C176	QCY21HK-102	1000PF 50V CERAMIC	
	C177	QCS21HJ-391	390PF 50V CERAMIC	
	C178	QCS21HJ-391	390PF 50V CERAMIC	
	C179	QETB1HM-225	2.2MF 50V ELECTRO	
	C180	QETB1HM-225	2.2MF 50V ELECTRO	
	C181	QETB1EM-106	10MF 25V ELECTRO	
	C182	QETB1HM-225	2.2MF 50V ELECTRO	
	C183	QETB1HM-105	1MF 50V ELECTRO	
	C184	QETB1HM-105	1MF 50V ELECTRO	
	C185	QETB1HM-225	2.2MF 50V ELECTRO	
	C186	QETB1HM-474	0.47MF 50V ELECTRO	
	C192	QCC21EM-473	0.047MF 25V CERAMIC	
	C193	QCS21HJ-180	18PF 50V CERAMIC	
	C194	QCS21HJ-180	18PF 50V CERAMIC	
	C195	QEN51HM-474	0.47MF 50V NON POLE	
	C196	QCY21HK-102	1000PF 50V CERAMIC	
	C200	QCF21HP-103	0.01MF 50V CERAMIC	
	C201	QCY21HK-332	3300PF 50V CERAMIC	
	C202	QCY21HK-332	3300PF 50V CERAMIC	
	C203	QCY21HK-182	1800PF 50V CERAMIC	
	C204	QCY21HK-182	1800PF 50V CERAMIC	
	C210	QETB1CM-227	220MF 16V ELECTRO	
	C230	QCF21HP-103	0.01MF 50V CERAMIC	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R118	QRD167J-332	3.3K 1/6W CARBON	
	R119	QRD167J-221	220 1/6W CARBON	
	R121	QRD167J-391	390 1/6W CARBON	
	R122	QRD167J-272	2.7K 1/6W CARBON	
	R123	QRD167J-102	1K 1/6W CARBON	
	R124	QRD167J-681	680 1/6W CARBON	
	R125	QRD167J-332	3.3K 1/6W CARBON	
	R126	QRD167J-221	220 1/6W CARBON	
	R131	QRD167J-331	330 1/6W CARBON	
	R132	QRD167J-103	10K 1/6W CARBON	
	R133	QRD167J-473	47K 1/6W CARBON	
	R134	QRD167J-103	10K 1/6W CARBON	
	R135	QRD167J-470	47 1/6W CARBON	
	R136	QRD167J-103	10K 1/6W CARBON	
	R141	QRD167J-472	4.7K 1/6W CARBON	
	R142	QRD167J-331	330 1/6W CARBON	
	R143	QRD167J-103	10K 1/6W CARBON	
	R144	QRD167J-473	47K 1/6W CARBON	
	R145	QRD167J-103	10K 1/6W CARBON	
	R146	QRD167J-560	56 1/6W CARBON	
	R147	QRD167J-103	10K 1/6W CARBON	
	R148	QRD167J-103	10K 1/6W CARBON	
	R149	QRD167J-223	22K 1/6W CARBON	
	R150	QRD167J-103	10K 1/6W CARBON	
	R151	QRD167J-222	2.2K 1/6W CARBON	
	R153	QRD167J-103	10K 1/6W CARBON	
	R154	QRD167J-103	10K 1/6W CARBON	
	R155	QRD167J-562	5.6K 1/6W CARBON	
	R156	QRD167J-682	6.8K 1/6W CARBON	
	R157	QRD167J-103	10K 1/6W CARBON	
	R158	QRD167J-273	27K 1/6W CARBON	
	R159	QRD167J-561	560 1/6W CARBON	
	R160	QRD167J-183	18K 1/6W CARBON	
	R161	QRD167J-124	120K 1/6W CARBON	
	R162	QRD167J-124	120K 1/6W CARBON	
	R163	QRD167J-392	3.9K 1/6W CARBON	
	R164	QRD167J-392	3.9K 1/6W CARBON	
	R165	QRD167J-274	270K 1/6W CARBON	
	R166	QRD167J-274	270K 1/6W CARBON	
	R167	QRD167J-473	47K 1/6W CARBON	
	R168	QRD167J-103	10K 1/6W CARBON	
	R169	QRD167J-103	10K 1/6W CARBON	
	R171	QRD167J-682	6.8K 1/6W CARBON	
	R172	QRD167J-682	6.8K 1/6W CARBON	
	R180	QRD167J-472	4.7K 1/6W CARBON	

Resistors

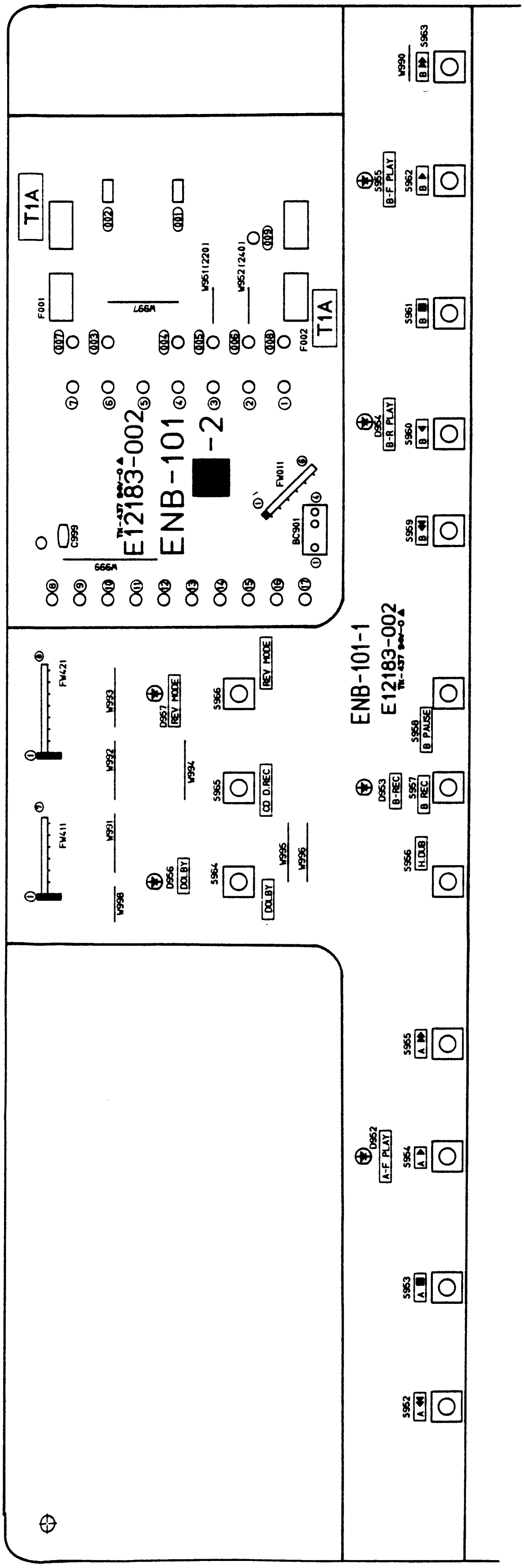
⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R181	QRD167J-222	2.2K 1/6W CARBON	
	R182	QRD167J-181	180 1/6W CARBON	
	R190	QRD167J-472	4.7K 1/6W CARBON	
	R194	QRD167J-472	4.7K 1/6W CARBON	
	R195	QRD167J-473	47K 1/6W CARBON	
	R196	QRD167J-222	2.2K 1/6W CARBON	
	R197	QRD167J-222	2.2K 1/6W CARBON	
	R198	QRD167J-822	8.2K 1/6W CARBON	
	R199	QRD167J-472	4.7K 1/6W CARBON	

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E12184-001(S)	CIRCUIT BOARD	
	J101	EMV7112-007	CONNECTOR	
	L106	EQL3001-102K	INDUCTOR	
	L111	EQL2103-393	INDUCTOR	
	L112	EQL2103-393	INDUCTOR	
	T101	EQR1111-014	AM RF COIL	
	T102	EQR1111-005	AM RF COIL	
	T103	EQR1207-015	MW OSC COIL	
	T104	EQR1307-009	LW OSC COIL	
	T105	EQT2140-017	I.F. TRANSFORMER	
	T107	ECB1560-008	CERAMIC FILTER	
	AT101	EMB41YV-301K	ANTENNA TERMINAL	
	CF101	ECB2118-006R	CERAMIC FILTER	
	CF102	ECB2118-006R	CERAMIC FILTER	
	EP101	E70225-001	EARTH PLATE	
	FE101	EAF2203-002	FRONT END	A
	FE101	EAF2203-002	FRONT END	B
	FE101	EAF2203-001	FRONT END	C
	JB103	EMV7125-005R	CONNECTOR	
	JB104	EMV7125-004R	CONNECTOR	
	LP102	EQF0102-001	LOW PASS FILTER	A
	LP102	EQF0102-001	LOW PASS FILTER	B
	SF101	EQF0201-006	BAND PASS FILTER	A
	SF101	EQF0201-006	BAND PASS FILTER	B
	TC105	ENZ1003-006	TRIMMER	
	TC106	ENZ1003-006	TRIMMER	
	XT102	ECX0007-200KC	RESONATOR	
	XT103	ECX0000-456KR	RESONATOR	

■ENB-101 ☐ Cassette Switch and Power Primary PC Board Ass'y

Note: ENB-101 ☐ varies according to the areas employed. See note (1) when placing an order.


T1A
T1A
F001
F002
L66A
W951(220)
W952(240)
E12183-002
ENB-101
-2
TK-437
FW011
BC901
C999
S66A
ENB-101-1
E12183-002
FW421
FW411
W993
W992
W991
W998
W994
W995
W996
D957
REV MODE
S966
REV MODE
D956
DOLBY
S964
DOLBY
S965
CD D.REC
W990
S963
B ▶▶
D955
B-F PLAY
S962
B ▶
S961
B ■
D954
B-R PLAY
S960
B ◀
S959
B ◀◀
S958
B PAUSE
D953
B-REC
S957
B REC
S956
H.DUB
S955
A ▶▶
D952
A-F PLAY
S954
A ▶
S953
A ■
S952
A ◀◀

Note (1)

PC Board Ass'y	Designated Areas
ENB-101 A	Other Countries
ENB-101 B	Continental Europe (with LW), Switzerland (with LW), West Germany (with LW), Italy (with LW)
ENB-101 C BS	the U.K.(with LW)
ENB-101 D	Australia

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D952	SLH-34MC3F	L.E.D. ROHM	
	D953	SLH-34VC3F	L.E.D. ROHM	
	D954	SLH-34MC3F	L.E.D. ROHM	
	D955	SLH-34MC3F	L.E.D. ROHM	
	D956	SLH-34MC3F	L.E.D. ROHM	
	D957	SLH-34DC3F	L.E.D. ROHM	

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E65508-002	TAB	
		EMG7331-001	FUSE CLIP	A
		E12183-002(S)	CIRCUIT BOARD	A
		E67132-T2R0	FUSE LABEL	A
		EMG7331-001	FUSE CLIP	B
		E12183-002(S)	CIRCUIT BOARD	B
		EMG7331-001	FUSE CLIP	CBS
		E12183-002BS(S)	CIRCUIT BOARD	CBS
		EMG7331-001	FUSE CLIP	D
		E12183-002(S)	CIRCUIT BOARD	D
	S952	ESP0001-018	TACT SWITCH	
	S953	ESP0001-018	TACT SWITCH	
	S954	ESP0001-018	TACT SWITCH	
	S955	ESP0001-018	TACT SWITCH	
	S956	ESP0001-018	TACT SWITCH	
	S957	ESP0001-018	TACT SWITCH	
	S958	ESP0001-018	TACT SWITCH	
	S959	ESP0001-018	TACT SWITCH	
	S960	ESP0001-018	TACT SWITCH	
	S961	ESP0001-018	TACT SWITCH	
	S962	ESP0001-018	TACT SWITCH	
	S963	ESP0001-018	TACT SWITCH	
	S964	ESP0001-018	TACT SWITCH	
	S965	ESP0001-018	TACT SWITCH	
	S966	ESP0001-018	TACT SWITCH	
	BC901	EWS243-015T	SOCKET WIRE	
	FW011	EWR36B-55LST	FLAT WIRE	
	FW411	EWR37B-20LST	FLAT WIRE	
	FW421	EWR38B-20LST	FLAT WIRE	

Accessories List

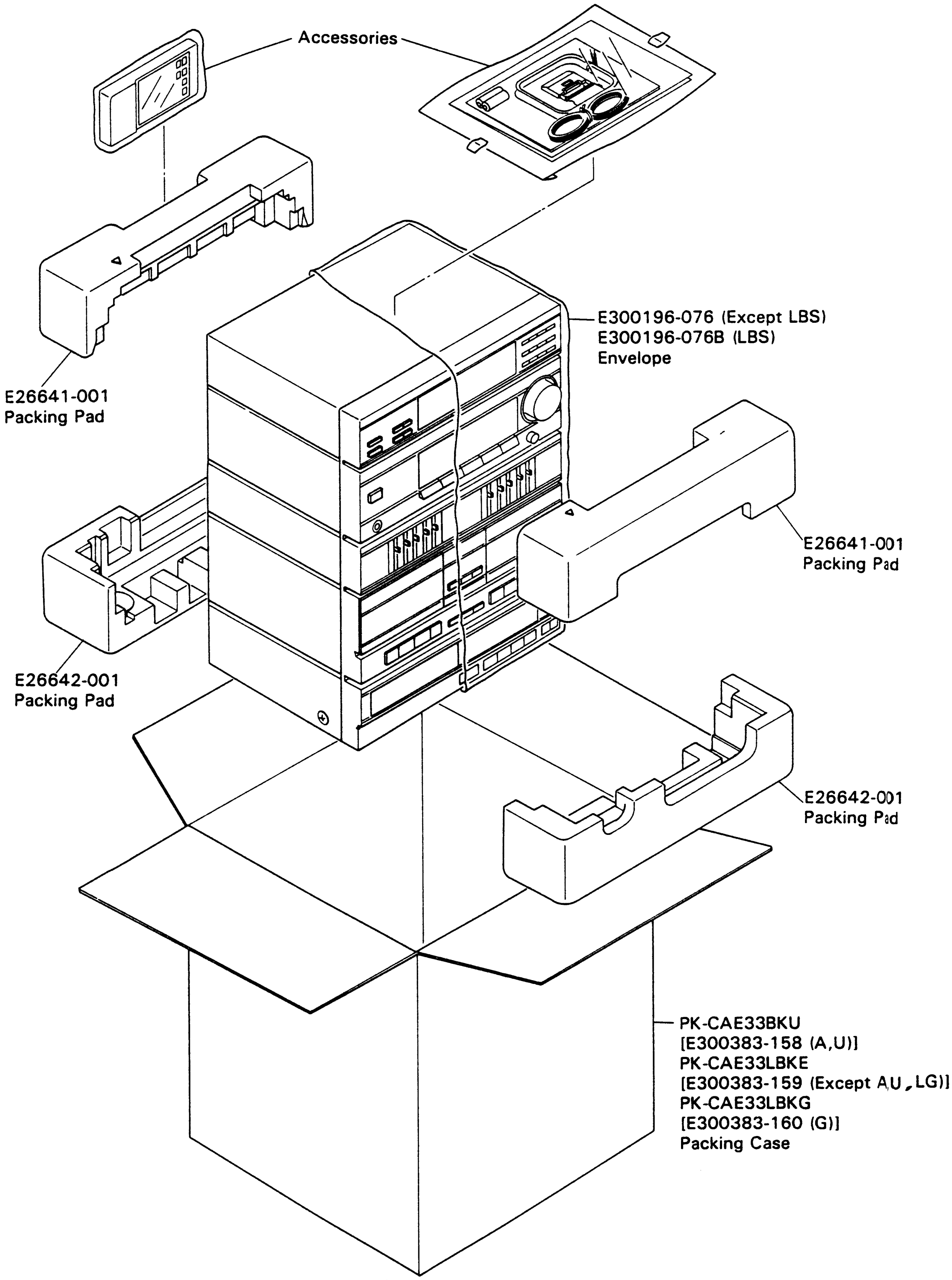
⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1575A	Instruction Book	1		Except LGI, LBS
	E30580-1594A	Instruction Book	1		LGI
	E30580-1575ABS	Instruction Book	1		LBS
	BT20029C	Warranty Card	1	for Australia	A
	BT20119	Warranty Card	1	for New Zealand	A
	BT20060	Warranty Card	1		LBS
	BT20117	Warranty Card	1		LG
	BT20066A	EEC Agency	1		LBS
	E43486-340A	Safety Sheet	1		LBS
	QZL1008-001	FTZ Information Sheet	1		LG
	EQB4001-015	AM Loop Antena	1		
	EWP502-005K	Built in Antena	1		Except LG
	E67007-001	Wire Antena	1		LG
	EMZ2001-011	Adapter	1		LEV, LGI
	TCP-3428	Audio Tape Panflet	1		U, A
	TCN-3379	Audio Tape Panflet	1		Except U, A
	UM-4NJ-2PSA	Battery	1		
⚠	E04056	Siemens Plug	1		U
	E35497-019	Caution Sheet	1	220V	U
	RM-SE33U	Remote Control	1		
	RM-SR85UBATC	Battery Cover	1		
	E300196-033	Envelope	1		Except LBS
	E300196-033B	Envelope	1		LBS

⚠: Safety parts

The Marks Designated Areas

A····················Australia
U····················Other Countries
LG····················West Germany (with LW)
LBS····················the U.K. (with LW)
LE , LEF················Continental Europe
LEV····················Switzerland (with LW)
LGI····················Italy (with LW)
No mark indicates all areas.

Packing Materials and Part Numbers


Accessories
E300196-076 (Except LBS)
E300196-076B (LBS)
Envelope
E26641-001
Packing Pad
E26641-001
Packing Pad
E26642-001
Packing Pad
E26642-001
Packing Pad
PK-CAE33BKU
[E300383-158 (A,U)]
PK-CAE33LBKE
[E300383-159 (Except A,U, LG)]
PK-CAE33LBKG
[E300383-160 (G)]
Packing Case

The Marks Designated Areas

A	Australia	LE , LEF	Continental Europe
U	Other Countries	LEV	Switzerland (with LW)
LG	West Germany (with LW)	LGI	Italy (with LW)
LBS	the U.K. (with LW)		

No mark indicates all areas.